

**AN ENVIRONMENTAL CONTROVERSY: HOW NEWSPAPERS FRAMED  
COVERAGE OF THE BUSH ADMINISTRATION'S PROPOSAL TO DRILL  
FOR OIL AND NATURAL GAS IN THE ARCTIC NATIONAL WILDLIFE  
REFUGE**

by

Anthony David Dudo

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Communication

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**AN ENVIRONMENTAL CONTROVERSY: HOW NEWSPAPERS FRAMED  
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FOR OIL AND NATURAL GAS IN ALASKA'S ARCTIC NATIONAL WILDLIFE  
REFUGE**

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## **ABSTRACT**

The goal of this study was to assess how a selection of newspapers framed coverage of the Bush Administration's first-term proposal to institute drilling for oil and natural gas in Alaska's Arctic National Wildlife Refuge (ANWR). Content analysis was used to systematically examine 214 ANWR-related articles and editorials published between February 2001 and March 2003 in 5 strategically chosen United States newspapers. Reliability testing was conducted, resulting in a 61-item recording instrument that covered background information, thematic and episodic frames, consequence frames, sources, drilling perspective and tone.

The results corroborate findings from existing communication literature that criticize the quality of environmental news coverage. Although this study uncovered some promising qualities—the ANWR issue frequently appeared in the first section of newspapers and was presented, overall, without being significantly skewed to a specific pro- or anti-drilling perspective—the framing patterns illustrated overly parsimonious coverage: episodic content dominated thematic coverage; government sources were privileged over all other sources; and a scant number of potential ANWR consequences were discussed. As such, as posited by extant research, it is probable that the media content identified in this study was likely to foster among its users a nebulous, decontextualized understanding of the ANWR issue and, perhaps more importantly, an ethereal representation of how this issue can most effectively be resolved.

## **Chapter 1**

### **INTRODUCTION**

The goal of this study was to assess how a selection of newspapers framed coverage of the Bush Administration's first-term proposal to institute drilling for oil and natural gas in Alaska's Arctic National Wildlife Refuge (ANWR). To accomplish this objective, the following topics were addressed: the significant, and often problematic role the media play in developing the public's understanding of environmental issues; ANWR and the environmental controversy that spawned as a result of proposals aimed to open the area to oil and gas development; the concept of framing as a theory through which to better understand the interplay between the media and the public, specifically as an appropriate conduit through which to assess newspaper coverage of the ANWR controversy; a sample of extant environmental communication studies predicated on framing theory; and last, a content analysis of ANWR-related newspaper coverage published between February 2001 through March 2003.

## **THE ENVIRONMENT AND THE MEDIA**

Numerous studies have shown that the media are a significant source of environmental information for people (Pompper, 2004; Signorielli, 1993). Shanahan, Morgan and Stenbjerre (1997) postulated that a significant amount of the public's knowledge of environmental issues is likely to come from the media; they wrote,

Certainly much of what most people hear about such issues as the greenhouse effect, global climate change, ozone depletion, water and air pollution, and other environmental threats is likely to come from the media (or from others who have heard it from the media), since our first-hand knowledge of the state of the environment (writ large) is likely to be minimal (p. 306).

In fact, it has been suggested that the media are frequently the only source people use to glean information about environmental issues (Nitz & West, 2004; Shanahan & McComas, 1997). Ader (1995) suggested that environmental issues qualify as unobtrusive issues (issues that humans do not directly experience), which, by their nature, are more susceptible to a significant agenda-setting effect (p. 300), and consequently that “the public needs the media to tell them how important an issue the environment is” (p. 310). Hansen (1992) stated that “Media discourses help shape and set the parameters of discussion and understanding of environmental issues” and for resulting social and policy responses (p. 500). Moreover, media coverage of environmental issues can heighten or diminish the amount of attention the public pays to these issues (Priest, 2001) and

strongly influences the political discussions that take place about the environment (Carmen, 1998).

As a result of the significant role the media play in developing the public's understanding of environmental issues communication researchers have increasingly analyzed this dynamic. Some findings have identified positive attributes associated with the media's representation of environmental issues. Fortner and Mayer (1991) (as cited in Shanahan, Morgan, & Stenbjørre, 1997) stated that media coverage could be related to increasing environmental knowledge. Priest (2001) and Smith (2002) found that the media play a significant role in educating the public about environmental issues, and Granzin and Olsen (1991) noted that previous research linked the use of media with recycling. Collectively, these findings imply that the news media not only play a significant role in molding the public's knowledge of environmental issues, but also play a part in the public's likelihood to participate in environmentally-friendly behaviors.

Conversely, numerous findings have criticized the quality of environmental news coverage. Nitz and West (2004) wrote, "[Media] Coverage of the environment . . . is poisoned by inconsistencies, distortions, and a misrepresentation of data" (p. 207). Liebler and Bendix (1996) noted that environmental news coverage is typically devoid of scientific explanations and pro-environmental "mobilizing information" (p. 54) and has been "crisis- or event-oriented" (p. 53). Nitz and West (2004) found that newspaper coverage of environmental issues during the 2000 presidential election lacked substance and instead, portrayed negative tones and focused on images rather than issues. Furthermore, coverage of environmental issues has centered on dramatic, improbable

environmental risks (Earle & Cvetkovich, 1995) and has emphasized problems and conflicts instead of solutions (Jaehne, 1990). One primary explanation for the alleged poor quality of environmental news coverage includes the assertion that journalists are ill-prepared and sometimes incapable of accurately reporting environmental issues (Lucas, 1994; Pompper, 2004) and thereby rely on authoritative sources (Cole, 1993; Toumey, 1996). Bowman (1996) and Stavins (1995) noted that journalists themselves admit that their coverage of environmental issues is weak, with a mere 30 percent reporting that they consider the coverage good. Overall, there is ample research portraying the media's inaccurate, misconstrued representation of environmental issues.

Collectively, these assertions imply not only that the news media play a significant role in developing the manner in which media users think about environmental issues, but perhaps more importantly, that the news media are not fulfilling this role acceptably. The media must do more than present myopic, sensationalized information about the environment, they must present detailed information in a contextualized, accurate manner so as to equip the public with the knowledge they need to guide their understanding of, and actions toward, the natural environment. Gore (1991) stated, "The media have a responsibility to inform and to educate, to tell us not only what is happening today but also why it is happening and what it will mean to us—today *and* tomorrow. ... News reporting, by drawing attention to problems and issues, moves policy. Environmental reporting is no different" (p. 183). These contentions highlight a dire need for more research to be conducted on the media's role in disseminating information about environmental issues. Consequently, environmentally-based news

coverage and the effects of this coverage on audiences must be further explored. This study aims to explicate this dynamic by examining newspaper coverage of the Bush Administration's first-term proposal to open ANWR to oil and natural gas development.

## **THE ARCTIC NATIONAL WILDLIFE REFUGE**

### ***Background***

The Arctic National Wildlife Refuge (ANWR), managed by the United States Fish and Wildlife Service (USF), is comprised of more than 19 million acres and is the second largest refuge in the United States. Located at the Northeast corner of Alaska directly beside Canada, ANWR contains a diverse array of pristine geographical landscapes including mountains, forests, tundra, and wetlands. ANWR is frequently referred to as “America’s Serengeti” for the unique, undisturbed plant, animal and aquatic life that reside there (Corn, Kumins, & Baldwin, 2003). ANWR’s coastal plain, located on the Northern edge of the refuge on the Beaufort Sea, contains the greatest abundance of the refuge’s flora and fauna and is therefore frequently considered the “biological heart of the refuge” (Shohov, 2003, p. 1). Additionally, ANWR’s coastal plain is believed by experts to contain copious amounts of oil and gas (roughly 18% of the total U.S. oil reserves), similar to the area’s westerly neighbor Prudhoe Bay, a state-owned oil field (Baldwin, 2003; Shohov, 2003). It is the presence of these entities—prolific wildlife and wilderness with the potential for oil and gas deposits—that have placed ANWR amid heated debate for the past four decades.

In 1960, less than one year after Alaska was formally admitted to the Union, the Secretary of the Interior issued a Public Land Order proclaiming the North Slope of Alaska as the Arctic National Wildlife Range in order to protect the area's unique wilderness. The area obtained its current name, the Arctic National Wildlife Refuge, in 1980 when Congress passed the Alaska National Interest Lands Conservation Act (Baldwin, 2003). Since ANWR's inception, law has forbidden the development of oil and gas in the refuge. However, numerous attempts have been made to legalize oil and gas drilling in the refuge. In 2001 when President George W. Bush introduced his administration's National Energy Policy which emphasized the development of domestic natural gas and oil reserves in ANWR (Twyman, 2003). On February 26, 2001 senate Republican leaders introduced the energy bill that called for the opening of ANWR to gas and oil development (*Washington Post*, 2001). Prior to Bush's proposal, four unsuccessful efforts were made in Congress within the previous 13 years (*Washington Post*, 2000). On March 19, 2003, the senate narrowly rejected the proposal to drill for oil and gas in ANWR (*New York Sun*, 2003). However, the proposal remains an issue since Congress did not officially designate ANWR a wilderness according to the Wilderness Act of 1964, the most significant echelon of protection that can be given to a federal land (Denning, 1993). As a result, pressure continues from the GOP and oil companies to allow oil and gas development in ANWR. In fact, as of March 16, 2005, the ANWR drilling issue resurfaced when the Senate endorsed oil drilling in ANWR by assuming ANWR-based revenues in a budget bill (*New York Times*, 2005).

### *The ANWR Controversy*

The controversy was (and will continue to be) centered on the debate over the impact of oil and gas development in ANWR. The anti-drilling perspective maintains that drilling in ANWR will cause devastating environmental damage, while the pro-drilling perspective argues that ANWR's wildlife and oil development can co-exist. In addition to President Bush and the GOP, proponents of development include the Alaskan government and large petroleum corporations, such as British Petroleum, Phillips Petroleum, Chevron and Exxon Mobil (Twyman, 2003). Drilling advocates have a number of reasons to justify why they believe the rewards of developing oil and gas in ANWR will outweigh any potential costs. More specifically, the proponents contend that oil production in ANWR will reduce the United State's dependence on the Middle East, reduce the cost of rising energy prices, and create a significant number of new jobs (Corn, Kumins, & Baldwin, 2003). Multiple factors have prevented the industry from accessing ANWR's gas reserves including the area's geographic distance from markets, its harsh climate and weather, and the resulting high costs associated with constructing and operating facilities in the area and the transportation of the oil and gas (Twyman, 2003). However, development proponents contest that technological advancements can overcome these challenges and reduce the extent of environmental degradation resulting from the process.

The anti-drilling perspective also posits a number of arguments to support their stance. Development opponents maintain that the value of ANWR's unscathed ecosystem far outweighs the value of potential oil production. They contend that ANWR should be

designated as an official wilderness and that the oil and gas found there would not provide the long lasting energy security that proponents espouse (Corn, Kumins, & Baldwin, 2003). One major argument is that drilling will cause significant harm to indigenous wildlife including migratory birds, polar bears, grizzly bears, porcupine caribou, wolverines, wolves, arctic foxes and whales (Shohov, 2003). Other anti-drilling arguments include that oil production in ANWR would not alleviate our dependence on foreign oil. More specifically, the anti-drilling perspective contests that oil development in ANWR could not be started for 7 to 12 years, that ANWR's coastal plain contains only a six month supply of oil at the U.S.'s current consumption rates, and that increasing domestic supplies of oil would not necessarily translate into monetary savings.

Additionally, anti-drillers also cite the inevitable potential for oil spills (Shohov, 2003), the potential to violate the international Marine Mammal Protection Act (MMPA), and the displacement of native peoples living in ANWR (Baldwin, 2003). Interestingly, recent public opinion polls have shown majority opposition to drilling in ANWR.

According to Shohov (2003) recent polls revealed that two-thirds of Americans believe ANWR should be protected from drilling. Additionally, three polls conducted by the Gallup Organization between 2001 and 2003 found between 51% to 56% of their sample opposed to ANWR drilling and 40% to 44% in favor of ANWR drilling (<http://www.defenders.org/wildlife/arctic/news/pollgraph.pdf>).

The ANWR issue presents a number of key aspects that are of particular interest to both sides of the controversy including, among others, the environmental protection standards and how they would be monitored, which agency would be responsible for

administering the leasing program, and the degree to which the leasing program could be judicially reviewed (Baldwin, 2003). Overall, Congress has three legislative options regarding the ANWR issue: Congress could allow development to proceed; Congress could designate the refuge a wilderness and consequently disallow the potential for oil development; or Congress could do nothing, which would also disallow development since current law requires congressional action for oil development in ANWR, but would also keep the door open to future debate (Corn, Kumins, & Baldwin, 2003). By voting against the drilling proposal in 2003 but not designating ANWR a wilderness, Congress has essentially chosen the third option.

### ***ANWR: A Significant Environmental Issue***

Overall, the ANWR drilling issue has garnered an ample amount of media discourse and promises to garner more as America's energy security becomes an even more pressing issue. Furthermore, the ANWR issue represents a number of critical environmental issues including energy reform, sustainable development, and habitat and wildlife conservation. To this end, the ANWR issue simultaneously embodies the three major environmental risk themes presented by American newspapers throughout the greater portion of the 20<sup>th</sup> Century's last two decades as identified by Pompper (2004); the Power and Energy Generation theme, the Toxic Waste and Pollution theme, and the Conservation and Preservation theme. Combined, these characteristics classify the ANWR issue as a significant environmental issue, and consequently, as an issue with enough magnitude to warrant scholarly evaluation. In short, the ANWR issue provides an ideal opportunity to examine the media discourse and public culture of a current,

prominent environmental issue. In order to conduct this examination, the proposed study will use mass communication's framing theory to guide a systematic content analysis of how newspapers covered the Bush Administration's first-term attempt to legalize the development of oil and gas in ANWR.

## **FRAMING**

Framing theory provides an effective means through which to examine the media's role in developing the public's disposition toward environmental issues. Liebler and Bendix (1996) noted, for example, "The concept of framing is central to an understanding of the media role in shaping environmental debate" (p. 54) and Pompper (2004) noted, "Environmental risk policy issues are far-reaching, complex, and controversial, thereby offering a universal context for mining the framing concept" (p. 101). With these contentions in mind, it seems evident that framing theory, despite its somewhat scattered conceptualization (Entman, 1993), has the potential to increase our nascent understanding of the interplay between media coverage of environmental issues and the public's knowledge of, and attitudes toward, these same issues. As a result, the proposed study, like an abundance of environmental communication research, will be rooted in framing theory. A sampling of how framing theory has been used to inform environmental communication research will be provided later, but first, it is necessary to discuss framing theory: its relevance; conceptualizations; and ontological and epistemological assumptions.

### ***Framing: Relevance and Explanation***

Walter Lippmann (1922) presciently noted that the mass media function as a primary origin of the pictures in our heads, granting us impressions of the external world of public affairs that resides within a realm beyond which we can directly experience. Since Lippmann posited this notion more than three-quarters of a century ago, the mass media have expanded exponentially into the far-reaching corners of the globe, and into the daily routines and rituals that govern our lives. Surely, the extent to which Lippmann gave the media credit for constructing our realities in the 1920s has been supplanted many times over. It is with this notion in mind—that the mass media play a weighty role in defining our understanding of public affairs—that framing theory represents an important area of study in mass communication.

Mass communication researchers have construed a myriad of theories to explain how news is identified and defined (Pompper, 2004); the concept of framing is one such theory. Placing framing theory in a historical context is somewhat difficult. Ervin Goffman is frequently credited as having originated the notion of framing in 1974. Interest in framing grew out of a concern for how media organizations influence the choice of news content and how these choices subsequently affect their audiences (McQuail, 2000). Although framing is concerned with the processes of how media sources select and develop news, the primary theoretical concern of framing is to examine how news can change the manner in which audience members activate knowledge of public affairs (Price & Tewksbury, 1997). Overall, in a basic sense,

framing aims to examine the presentation of mediated news content, and subsequently how this presentation influences audiences.

It is a widely accepted notion that the public formulates much of their knowledge about public affairs through exposure to mediated news content (Shen, 2004). Moreover, it is in deciphering this mediated information and constructing subsequent knowledge that gives the public the ability to be productive members of society. To this end, Kinder and Berinsky (1999) noted, “Before citizens can evaluate the various options that they are asked to judge and choose between, they must first come to some understanding of them” (p. 3). Given that the media provide us with a substantial amount of the information we need to understand societal issues, it seems only natural that researchers strive to increase our understanding of the nature of this information and, ultimately, the manner in which it affects the public. Doing so requires a systematic examination of the media’s presentation of news.

### ***Conceptualizing Framing***

A number of negative connotations are associated with the concept of framing. Framing is frequently viewed as a process that prevents the news from being objective (Pompper, 2004) due to the logistical constraints of newsgathering and selection (McQuail, 2000), the conventions and working conditions of journalists and editors (McLeod, Kosicki, & McLeod, 2002), and as a process that favors the ideological perspectives of elite and authoritative sources and therefore upholds the dominant status quo (Druckman, 2001; Pompper, 2004; Price & Tewksbury, 1997). These allegations become more serious considering that “mainstream newspapers are perceived as official,

conventional, traditional, and legitimate news purveyors” (Pompper, 2004, p. 107). It should be noted that these assertions populate much of the framing literature and suggest that framing theory most comfortably resides within mass communication’s alternative paradigm—a perspective that posits a more critical view of society and the functionality of the media than its counter, the dominant paradigm of mass communication (McQuail, 2000). Conversely, it should be noted that media frames are not inherently deleterious; in certain instances media frames are beneficial.

Defining the concept of *frames* and *framing* is an arduous task. (It should be noted that these terms connote the same concept, with framing representing the process of implementing frames.) In fact, numerous scholars consider the inconsistent conceptualization of framing to be the theory’s most significant problem. In the most general sense, a *frame* is a lens through which to view an issue in a certain manner. Frames place news information in coherent packages that help audience members make sense of the external world that they cannot directly experience (Kinder & Berinsky, 1999). Gamson and Lasch (1983) considered a frame to be the “central organizing idea for understanding events related to the issue in question” (p. 398). Entman (1993) discussed a number of specific attributes that define frames, most notably those of selection and salience; he posited, “To frame is to select some aspects of a perceived reality and make them more salient in a communicating text” (p. 52). The term salience implies that frames make certain aspects of news issues more memorable, noticeable, or meaningful to audiences (Entman, 1993). Overall, frames determine what aspects of an issue people notice, how they come to understand this issue, and how they choose to act

upon it. One must also therefore recognize that frames not only color the issues they address, but simultaneously color the issues they neglect to mention (Entman, 1993).

Price and Tewksbury (1997) noted that framing theory aims to analyze news story presentations (p. 181). They noted, “Framing focuses not on which topics or issues are selected for coverage by the news media, but instead on the particular ways those issues are presented, on the ways public problems are formulated for the media audience” (p. 184). For instance, a researcher aiming to study how the media frame ecosystem health in the Florida Everglades would analyze the manner in which the media present this topic. A researcher might therefore examine to what extent the media report the Florida Everglades as being vigorous or unhealthy. A news story discussing the proliferation of avian species in the Florida Everglades would be framing the ecosystem as healthy, whereas a news story discussing heightened pollution levels in the Florida Everglades would be framing the ecosystem as unhealthy. This is a rather simplistic example of a news frame, but it illustrates that frame research examines the manner in which the media *present* news topics. Put simply, framing is concerned with the presentation of issues reported in mediated news content; arguably an extension of agenda setting and priming that focus more on news story selection (Price & Tewksbury, 1997).

The characteristics discussed above referred to media-related frames. In addition to media-related frames, further conceptualization points out that framing theory also examines the perspectives used by audiences to make sense of topics in the news (McLeod et al., 2002). Framing theory therefore addresses media-related frames and audience-related frames. In the audience-related aspect, concern is placed with how

media frames affect the audience, and considers the frame of reference within the audience member's mind (McQuail, 2000). Entman (1993) defined audience frames as "mentally stored clusters that guide individual's processing of information" (p. 53) and as "information-processing schemata" (Entman, 1991, p. 7). Framing theory implies that audiences of news will use frames similar to news frames to make sense of incoming news; an assumption that supposes a passive, malleable, and relatively homogenous audience that is directly influenced by exposure to news content. McQuail (2000) stated, "The audience is thought to adopt the frames of reference offered by journalists and see the world in a similar way" (p. 495).<sup>1</sup> Moreover, it is important to recognize that a circular relationship exists between media and audience frames whereby those who develop media frames take into consideration predicted audience frames (Entman, 1991).

There are a number of dimensions that can be assessed in order to evaluate frames quantitatively. As previously noted, the goal of framing is to understand the nature of media presentations, and ultimately how these presentations affect audiences. However, before the effects of media frames can be examined, media content and messages must first be described and understood (Stacks, Hocking, & McDermott, 2003). For this reason, content analysis is the methodological technique necessary to use when studying media frames (McQuail, 2000).

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<sup>1</sup> Recently, scholars have come to maintain that audience members are affected by media frames more indirectly; a result of an amalgamation of interpersonal and societal influences (McLeod et al., 2002), and media usage and cognitive influences (Neuman, Just, & Crigler, 1992; Pan & Kosicki, 1993; Price & Tewksbury, 1997). Audience members are thought to impose their frames of interpretation on the news via their ingrained understandings (i.e., schemas) of events and issues which help them process news information easier (McQuail, 2000).

Simply put, frames are isolated via content analysis by systematically examining different characteristics of mediated news stories. There are a number of approaches a researcher can employ to evaluate media frames. McQuail (2000) noted that a large number of textual elements can be used to analyze frames, including “the use of certain words or phrases, making certain contextual references, choosing certain pictures or film, referring to certain sources” (p. 343). Gamson and Lasch (1983) suggested that frames can be analyzed by examining five symbolic framing devices (metaphors, exemplars, catchphrases, depictions and visual images) that provide a framework from within which to view an issue, and reasoning devices (causal attributions, consequences and appeals to principles) that provide justification for a general position (p. 223). Pan and Kosicki’s (1993) framing analysis uses four framing devices—syntactical, script, thematic and rhetorical structures—through which to assess media frames. All told, the systematic analyzation of these characteristics (and others) via content analysis provide researchers with the data they need to judge media frames.<sup>2</sup> For this study a number of specific framing criteria were measured via content analysis in order to assess media-related frames.

In sum, numerous scholars have noted the potential framing theory has to illuminate our understanding of the interplay between mediated news content and the audience. Framing theory provides a means through which to describe the communicating text (Entman, 1993) and better understand how audiences comprehend

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<sup>2</sup> A full understanding of issue framing requires the analysis of the media frame and the audience frame (Nelson, 1999; Schuefele, 1999); such an endeavor requires further testing typically conducted through experimentation.

and learn from mediated news content (McQuail, 2000). Despite framing theory's somewhat disjointed existence, studying the effects of framing has burgeoned (Bryant & Miron, 2004; McLeod et al., 2002) and is considered by some researchers a primary theory in media effects research (Price & Tewksbury, 1997).

### ***Framing: Extant Environmental Communication Research***

As previously mentioned, a number of environmental communication studies have been based on framing theory. Liebler and Bendix (1996) utilized elements of framing theory to analyze four years of network television news coverage of the old-growth forest/spotted owl controversy in the Pacific Northwest. Using Pan and Kosicki's (1993) syntactical and rhetorical frame dimensions, Liebler and Bendix found that, overall, the networks framed news to support the pro-cut side of the debate; the sources used by the networks and the reporter wrap-ups more frequently presented the pro-cut perspective. Furthermore, they noted, "The absence of coverage of ongoing research and debate on the ecological and economic aspects of the stories also allowed the more simple frame favored by the pro-cut side to come through" (p. 62). Interestingly, the authors suggested that a lack of enterprise on behalf of the journalists covering the issue, not bias, was most likely the reason for the networks adoption of the pro-cut frame.

Lucas (1994) analyzed how the Australian newspaper the *Sydney Morning Herald* covered the controversy surrounding the construction of a nuclear research reactor at Lucas Heights, an area near Sydney. Lucas found that two-thirds of the news stories in the *Herald* were framed to support the pro-construction side of the debate. Moreover, Lucas found that of that the other third of stories, only four discussed the scientific claims

regarding the construction of the reactor. Overall, Lucas noted four primary reasons for the Herald's pro-construction framing: the controversy's complexity was too difficult for the journalists to understand and therefore report accurately; the Herald's predisposition to defend the Australian government; the ineffectiveness of the anti-construction contingent; and the tendency for journalists to fall back on scientific myths. All told, Lucas noted that this study supported the notion that it's "not the force of the better argument which wins out in the end, but rather, that the 'better' argument wins by force" (p. 88). Overall, this study supported the hegemonic notion that elites are in a better position to frame news messages.

Davis (1995) examined how framing environmental communication affects attitudes and pro-environmental behaviors. More specifically Davis conducted an experiment in which environmental communication was broken down into three frames: *definition of the problem*, which was tested by an environmental message that discussed the positive environmental gains that would result from pro-environmental behaviors and, conversely, an environmental messages that discussed the negative environmental losses that would result from inactivity; *target definition*, which explored whether framing environmental risks in terms of current or future generations had a persuasive difference on promoting pro-environmental behaviors; and *behavior change*, which analyzed whether framing behaviors according to "taking less" (i.e., conservation) or "doing more" (i.e., recycling) had a persuasive effect on fostering pro-environmental behavior. In short, the findings illustrated that framing did influence responses to environmental messages and "subsequent intentions to participate in environmentally-responsible behaviors" (p.

295). More specifically, the findings pointed out that messages intended to promote pro-environmental behaviors are more effective when they appear “in a context which stresses how the target will be personally negatively affected if they continue to be inactive participants in environmentally-responsible behaviors” (p. 295).

Pompper (2004) conducted a longitudinal content analysis to examine the representation of environment risk in three high-circulation newspapers during the late 20<sup>th</sup> century. The results showed that each newspaper relied on varied sources involved in policy debates to produce news for its target audience; the *New York Times* (considered an elite paper) and the *USA Today* (considered a middle-class paper) both relied on elite (i.e., government and industry) sources, and the *National Enquirer* (considered a low-class paper) relied on public sources. Additionally, the findings showed that industry, government, public and interest group sources distinctly framed environmental risk news and that mainstream papers (i.e., the *New York Times* and *USA Today*) reinforced the dominant ideology by adhering to status quo frames and tabloid papers (i.e., the *National Enquirer*) undermined authority by presenting oppositional frames. As mentioned earlier, Pompper’s study also identified three reoccurring environmental risk frames in newspaper coverage, which included the toxic and waste pollution theme, the conservation and preservation of wildlife theme, and the power and energy generation theme. Overall, the findings supported the notion that newspaper coverage of environment risk issues was unbalanced; coverage was dominated by elite sources at the expense of divergent ideas and opinions.

In sum, framing theory has allowed communication researchers to better understand the media's presentation of environmental issues and continues to offer promise in this endeavor. This study used framing theory to inform a quantitative examination of recent newspaper coverage of the ANWR controversy. The following section describes the primary aspects of this study including the research questions and hypotheses, sample and methodologies.

## Chapter 2

### RESEARCH QUESTIONS AND HYPOTHESES

The overarching goal of the study was to examine the frames used by a select group of newspapers in their stories about the ANWR issue. More specifically, the study attempted to identify and describe particular framing patterns present within each specific newspaper's coverage of the ANWR issue, and among the collective coverage of all five newspapers. To accomplish this task, this study examined news stories for thematic and episodic content (Iyengar, 1991; Nitz & West, 2004), consequences (Gamson & Lasch, 1983; Sotirivic, 2000), source (Liebler & Bendix, 1996; Nitz & West, 2004; Pompper, 2004), and tone (Iyengar, 1991; Nitz & West, 2004). There are a number of additional framing dimensions that could have been used to examine the framing in news stories about the ANWR issue, but given logistical and time constraints, the primary researcher chose to consider the aforementioned framing aspects because they provided an efficient, revealing description of how this topic was framed. A more thorough discussion of these framing dimensions and the study's related research questions and hypotheses follows.

#### *Thematic versus Episodic*

Iyengar (1991) asserted that news stories can be constructively assessed by examining their episodic and thematic content. He wrote, "The episodic news frame focuses on specific events or particular cases, while the thematic news frame places political issues and events in some general context" (p. 2). More specifically, episodic news frames present single, specific cases related to a given issue and are based in

sensational and emotional appeals, while thematic news frames synthesize events into an overriding issue, discuss the effects of the issue, and provide audience members with useful background knowledge of the cause and effect relationships surrounding the issue (Nitz & West, 2004). Although most news stories are not wholly episodic or thematic in their presentation, one of these frames typically is preponderant and can be identified by reading the entire news story (Iyengar, 1991). Iyengar (1991) found that exposure to episodic news content reduced the likelihood that audience members would hold public officials responsible for the creation and alleviation of problems thereby reducing the extent to which the public engage in civic responsibility and make authority figures accountable. Additionally, learning that occurs as a result of exposure to episodic content may be “disjointed and unconnected to a larger contextual picture” (Nitz & West, 2004, p. 208). Thematic news coverage, on the other hand, was found to increase the extent to which audience members attributed responsibility for problems to authority and societal institutions; an indicator of increased self-efficacy among the public. In short, people exposed to thematic frames are thought to see more clearly the relationships between issues and “societal and structural factors” (Nitz & West, 2004, p. 208).

Episodic frames are more prevalent than thematic frames in news coverage (including newspapers) on a wide array of issues, including environmental issues (Iyengar, 1991; Nitz & West, 2004). Moreover, the tendency toward episodic framing in news coverage leads to the exclusion of environmental issues and the public’s ineptitude for effectively assessing these issues (Iyengar, 1991). Given these contentions, this study assessed the extent to which episodic and thematic frames were used in newspaper

coverage about the ANWR issue, an assessment that would provide information necessary to forming more accurate predictions about the effectual nature of exposure to this coverage. The following hypothesis and research question were posed:

**H1:** Episodic frames will be used more often than thematic frames in newspaper coverage of ANWR.

**RQ1:** Which frame—episodic or thematic—was used more frequently in each specific newspaper’s coverage of ANWR?

### ***Consequence Frames***

As previously noted, Gamson and Lasch (1983) suggested that issues can be broken into two categories: framing devices and reasoning devices. Whereas the framing devices of an issue deal with integrating information about an issue into a synthesized whole, reasoning devices emphasize analyzing the different parts of an issue. Gamson and Lasch (1983) identified three reasoning devices including “roots,” “consequences,” and “appeals to principle” (p. 400). This study evaluated consequences. A news story may be broken down into the consequence frames it uses to argue for a particular position on a particular issue (Gamson & Lasch, 1983). For example, one consequence frame in a news story about ANWR was that that the U.S. economy would benefit from gas and oil development in the region, whereas another consequence frame noted that indigenous wildlife may be desecrated as a result of the same development. If certain consequence frames of the ANWR drilling proposal are presented more frequently than others in news

coverage the subsequent arguments of audience members exposed to these messages may more likely parallel the predominant consequence frames presented in the news stories; more pro-drilling consequences would likely incite more pro-drilling sentiments among the public.

All told, assessing the divergence and frequency of the consequence frames used in newspaper stories highlighted the outcomes print media most commonly associated with the ANWR issue. Moreover, analyzing the consequence frames presented in news stories allowed for the identification of frames with more potential to inspire audience members to think about the policy ramifications of a given issue; something that links them more closely with public opinion processes (Sotirovic, 2000). The following research questions addressed the consequence frames depicted in this sample of newspaper stories about the ANWR drilling issue:

**RQ2:** Which types of consequence frames were most commonly used in coverage of ANWR?

**RQ3:** Which types of consequence frames were most commonly used in each specific newspaper's coverage of ANWR?

### *Sources*

There is a tendency among journalists to use the most readily available sources to provide information about environmental issues (Davis, 1995; Hendry, 1994, as cited in Nitz & West, 2004). Most often, these sources are government or institutional (i.e.,

business industry) in nature (Hansen, 1991). Although scientists are frequently used as sources by the print media (Wilkins & Patterson, 1991), as environmental issues become more politicized, scientists are used less as sources (Trumbo, 1996). Moreover, the media (specifically television) have been shown to represent environmentalists as “the topic of a joke” (Shanahan et al., 1997, p. 320). Using varied sources to discuss an issue in a news story could provide a more thorough presentation of a given issue, or it could confuse audiences (Nitz & West, 2004), and using a predominant source has the potential to privilege their viewpoints at the expense of other divergent perspectives (Tedesco, 1991). Overall, the sources used to provide information in news stories could play a significant role in influencing audiences about the issue at hand. To this end, Nitz and West (2004) stated, “It is important to ascertain which sources are cited in news stories” (p. 210). Consequently, this study set forth the following hypotheses and research question:

**H2a:** Newspaper stories about ANWR will most commonly use government sources.

**H2b:** Next to government sources, institutional sources will be used second most commonly in newspaper stories about ANWR.

**RQ4:** Which types of sources were most commonly used in each specific newspaper’s coverage of ANWR?

## *Tone*

Iyengar (1991) posited that the tone of news coverage plays an important role in influencing public opinion. Tone refers to the disposition—positive or negative—that a news story may convey about the issue it discusses. More specifically, the tone of a newspaper story is represented by the type of language it uses: inflammatory, contentious textual content denotes a negative tone whereas productive, conciliatory language denotes a positive tone. Negative tone has been shown to increase cynicism, induce affective judgments and decrease substantive discussion of the issue at hand (Moy & Pfau, 2000, as cited in Nitz & West, 2004). Given the combative nature that typically enshrouds environmental issues, it seems logical to assume that news stories covering these issues might have a negative tone, and subsequently, that these stories might contribute to the negative outcomes mentioned above.

To further investigate tone, the overarching issue stance each newspaper story presented toward the ANWR issue was also evaluated. As such, each newspaper story was assessed for its use of pro- and anti-drilling frames. Although issue stance and tone are different characteristics (issue stance may not necessarily speak to the aforementioned results of negative tone), issue stance was regarded as a characteristic of tone and highlighted, in general, the extent to which newspaper stories presented a favorable or critical view of the potential development in ANWR. As such, the following research questions were proposed:

**RQ5:** Did newspaper stories about ANWR more frequently present the pro- or anti-drilling perspective?

**RQ6:** Which drilling perspective—pro or anti—did each newspaper present more frequently in its news stories about ANWR?

**RQ7:** Regardless of whether the pro- or anti-drilling perspective was presented more frequently, what overall tone—positive or negative—did newspaper stories about ANWR present more frequently?

### ***Editorials versus News Articles***

As noted, newspaper stories, which included content-based articles and editorials, were the unit of analysis. The composition of news articles and editorials is different. Whereas authors of news articles are charged with providing a timely, neutral account of an issue, editorialists are expected to supplement accurate information about an issue with their related opinions. As such, editorialists, more so than authors of news articles, have an inherent formulaic ability to choose what characteristics of an issue to highlight, and consequently, which aspects of an issue to ignore. Moreover, if we accept Huckin's (2002) assertion that editorialists have broader understandings of issues and where the public stands on these issues than authors of news articles, we can see how editorialists not only have more freedom to inject their opinions into their work, but also how these opinions can be tempered by a more thorough consideration of how the audience will react to their story. In short, comparatively speaking, the structural differences between the genre of news articles and editorials may enable editorials to include more carefully

calculated frames. Therefore, it was believed that analyzing the framing patterns of the ANWR-related editorials provided data that represented more closely where each newspaper stood on the ANWR issue, and subsequently, where each newspaper believed its readership stood on the ANWR issue. Furthermore, given the suasive power of editorials—editorials frequently serve as sources of “opinion leadership” for citizens and government (Powlick, 1995, as cited in Coe, Domke, Graham, John & Pickard, 2004, p. 238)—it is important to evaluate the framing patterns they exhibit.

Ideally, newspaper articles and editorials would be compared for how they used each of the framing patterns assessed in this study (thematic and episodic frames, sources, consequences, tone, and pro- and anti-drilling frames). Unfortunately, however, such a comprehensive endeavor was not necessary or possible given the scope of this study. As such, the researcher chose to evaluate how newspaper articles and editorials used consequence frames since, more than any of the other framing patterns examined in this study, the consequence frames most directly represented the possible outcomes of the ANWR issue. Therefore, the following research question was posited:

**RQ8:** To what extent do the consequence frames identified in news articles correlate to the consequence frames identified in editorials?

## Chapter 3

### METHODS

#### *Sample*

A content analysis was used to address the aforementioned research questions and hypotheses. Each newspaper story was the unit of analysis. Only content-based news articles and editorials—not advertisements, letters to the editor, etc.—were used in the sample. The stories were selected from five newspapers: the *New York Times*, *Washington Post*, *Atlanta Journal-Constitution*, *Anchorage Daily News*, and *USA Today*. These papers were chosen because of their large readerships, national influence, and representation of diverse geographic areas (national and local). With the exception of the *Anchorage Daily News*, the *New York Times*, *Washington Post*, *USA Today* and *Atlanta Journal-Constitution* all boast large circulations. The *New York Times* is primarily construed as an elite newspaper. Pompper (2004) wrote that the *New York Times* “is known as a mainstream, elite newspaper for the upper class” which “has distinguished itself by stressing ‘information’ over ‘story’ in its writing style” (p. 100). The same criteria could be said of the *Washington Post*, a prestigious paper that also targets an elite, highly educated audience. Moreover, Pfau, Haigh, Gettle, Donnelly, Scott, Warr, and Wittenberg (2004) noted that the *New York Times* and *Washington Post* hold considerable political influence and “shape the agendas of other newspapers” (p. 80). *USA Today*, on the other hand, is considered a newspaper for America’s middle-class; a newspaper for

everyone (Pompper, 2004). For this reason, some consider *USA Today* a less prestigious paper than the *New York Times* or *Washington Post*. The *Anchorage Daily News* was chosen since it is a large Alaska newspaper in close geographical proximity to ANWR. Last, the *Atlanta Journal-Constitution*—an urban newspaper with a large circulation—was used to round out the sample. Like the *Anchorage Daily News*, the *Atlanta Journal-Constitution* was chosen for geographical reasons, specifically because it represented the Southeast region of the country.

The newspaper stories were located via the LEXIS-NEXIS™ database. The researcher acknowledges that LEXIS-NEXIS™ did not necessarily provide exhaustive access to all of the ANWR articles published in these five newspapers. Therefore, although the researcher intended to collect a census of ANWR articles, this content analysis most likely examined a sample of articles. The following phrase was used to identify potential newspaper stories on ANWR: “Arctic National Wildlife Refuge.” LEXIS-NEXIS™ searches returned a combined total of more than 300 newspaper articles about the ANWR drilling proposal in the *Washington Post*, *New York Times*, *Anchorage Daily News*, *USA Today*, and *Atlanta Journal-Constitution*. A final sample of 214 newspaper articles was used after the articles that merely alluded to the ANWR issue but contained no contextual elaboration on the topic were removed. The day the Senate introduced the drilling bill (2/26/01) and a week beyond the day the Senate rejected the bill (3/26/03) were used as the parameters for the search. The additional week was added to the end of the search parameter to allow for the inclusion of news stories about the

rejection of the bill. Newspaper stories published within these dates comprised the sample.

This particular parameter was chosen based on Downs' (1974) "issue-attention cycle" which identified five distinct stages through which every news issue progresses. When this study was conducted, the ANWR drilling controversy resided within stage five of Downs' issue-attention cycle, the post-problem stage. An issue enters this stage when it has been "replaced at the center of public concern" and "moves into a prolonged limbo" (p. 40); at this point the ANWR drilling issue still existed, but in a way that closely resembled the post-problem stage. However, as of March 16, 2005, the ANWR drilling issue resurfaced when the Senate endorsed oil drilling in ANWR (*New York Times*, 2005) and consequently moved out of stage five of the issue attention cycle. Prior to this most recent occurrence, media coverage (and public discourse) about the ANWR drilling issue most likely reached its peak while the proposal was debated in the U.S. Senate between the aforementioned dates. This time period most likely represented the ANWR drilling issue's presence in the second and third stages of Downs' issue-attention cycle. The second stage, alarmed discovery and euphoric enthusiasm, notes when the public suddenly becomes aware of and alarmed about a particular problem and wants the problem solved, and the third stage, realizing the cost of significant progress, indicates when the public begins to recognize the high cost of solving the problem. Analyzing the frames in newspaper stories about the ANWR drilling issue during the second and third stages not only provided a larger sample for this study, but also allowed for an

examination of this issue when it seemingly had its most significant and most recent grip on the national agenda.

### ***Coding - Categories***

Each news story was coded for thematic and episodic frames and was based on Nitz and West's (2004) two-thirds rule, which asserts that the frame appearing two-thirds of the time or more in a story dominates. Every story was read in its entirety and was judged as to which frame—thematic or episodic—was present at or above the two-thirds level. Frames judged to appear at or above the two-thirds level were coded as frames with major emphasis, and frames judged to appear at or below the one-third level were coded as frames with minor emphasis. When a story was judged to present thematic and episodic frames somewhat equally (when both frames were below the two-thirds level) the story was coded as mixed. For example, a story that predominantly presented (i.e., two-thirds or more of the story) a historical perspective of the ANWR drilling proposal was coded as primarily thematic, and a story that predominantly presented a specific group's opinion about the ANWR drilling proposal was coded as primarily episodic. Although it did not occur often, a frame that was not present in a story was coded as does not appear.

The consequence frames presented in each story were assessed. When a story presented varying consequences all versions were recorded. Furthermore, the frequencies of the consequences were coded. As mentioned previously, an example of a consequence frame is that a significant number of jobs would be created as a result of approving gas

and oil development in ANWR. The researcher anticipated that a somewhat large number of consequences would be cited and that a few primary consequences would be used more frequently than the remainder.

The sources used by each news story were isolated by reading the entire story (Nitz & West, 2004). The frequency of each source was recorded. The source categories were government (including President Bush), institutional (i.e., business industry), environmental, public citizens, academics, union members and others (for sources that do not fit the previous categories) (Nitz & West, 2004; Pompper, 2004).

Additionally, each news story was coded for its pro- or anti-drilling perspective and its overall tone using Nitz and West's (2004) coding scheme. The frequency of each perspective was recorded, and each news story was coded as presenting a pro- or anti-drilling perspective if two-thirds or more of the story references pro- or anti-drilling arguments. If stories could not be judged as presenting a pro- or anti-drilling perspective (when both perspectives were at or below the two-thirds level), they were coded as mixed. Second, each story was judged for overall tone—positive or negative—regardless of whether it was determined to display a pro- or anti-drilling perspective. News stories were coded as having a positive tone if two-thirds or more of the story used positive references to the aspects involved with the ANWR issue (i.e., a story that highlighted potential positive outcomes of the ANWR issue beyond the pro- or anti-drilling level). Conversely, news stories were deemed negative if two-thirds or more of the story used inflammatory language, made pessimistic, derogatory references to the aspects involved with the ANWR issue, and/or offered little information highlighting how the ANWR

issue could be effectively solved. When stories could not be judged as dominantly negative or positive, they were coded as mixed. In order to make the tone category exhaustive, stories that did not fit into the above three categories (i.e. a brief story that merely reported an ANWR related event) were considered neutral and coded as not having a tone. Overall, the categories outlined above were created to ensure that coding was mutually exclusive and exhaustive.

Finally, each newspaper story was coded as a news article or editorial, a delineation that was made easily since each newspaper clearly identified their articles and editorials.

### ***Codebook and Recording Instrument***

The recording instrument contained all of the variables, items and complete coding instructions (see the Appendix). These instructions explained how these variables and items were to be identified and categorized. Thorough descriptions and example phrases were provided for thematic and episodic frames, pro- and anti-drilling frames, and positive and negative tone. The recording instrument (RI) was divided into six primary sections: background information, sources, thematic and episodic frames, pro- and anti-drilling frames, positive and negative tone and consequence frames.

Background information included newspaper story number, newspaper, date of publication, type (i.e., news article or editorial), story title, page number, first and second author name/s, number of words, first and second author affiliation/by-line, news wire service and name of coder. Sources included government, institutional, environmental/scientific, public citizens, academics, union official/members and others.

Thematic and episodic frames, and positive and negative tone were coded for emphasis (e.g., none, minor, mixed or major) and placement (e.g., first or second) items. Pro- and anti-drilling frame items included emphasis, placement and total count. Consequence frame items included total count (see the Appendix for the list of consequence frames).

The RI contained 61 total measures: 15 background, 7 sources, 4 thematic and episodic frames, 6 pro- and anti-drilling frames, 4 positive and negative tone and 25 consequence frames.

As coding proceeded it became evident that certain modifications needed to be made to the RI. The following changes were the most notable. First, union sources were added to the list of sources to identify in the coding. Second, two measures aimed to count the total number of thematic and episodic frames in each story were removed in favor of two variables that measured the emphasis (minor, mixed and major) of thematic and episodic frames; the latter measurement technique—due to the nature of thematic and episodic frames—was more appropriate for coding purposes than the first. Third, six new consequence variables were added to the RI: drilling will create significant domestic profits; drilling will not create significant domestic profits; drilling will bolster America's national security; drilling will not bolster America's national security; drilling will hamper the development of alternative fuels and/or the conservation of fossil fuels; and drilling will not hamper the development of alternative fuels and/or the conservation of fossil fuels.

### ***Coding and Reliability Testing***

Using the RI described above the author collected data for 214 news stories. Every article was read numerous times. Initially, each story was read in its entirety. In subsequent readings the researcher took notes on the RI sheet regarding background information, sources, pro-and anti-drilling frames, tone and consequence frames. These notes were then utilized to enter the appropriate data codes on the coding sheets.

An independent coder coded one-fourth of the news stories in the sample ( $N=54$ ) to assess intercoder reliability (Hocking, Stacks, & McDermott, 2003). A systematic random sample with a skip interval was used to create the sample for the intercoder reliability analysis (Hocking, Stacks, & McDermott, 2003). The independent coder was trained how to use the RI, and once coding began the primary researcher and the independent coder did not discuss the coding procedure. Additionally, the independent coder was not aware of the study's specific research questions and hypotheses. Krippendorff's alpha was used to evaluate reliability (Krippendorff, 1980) and percent agreement scores were used when Krippendorff's alpha was artificially low (i.e., when an item was not coded by either coder).

The pilot reliability test revealed that all of the variables used in the analysis met acceptable criteria for reliability (Krippendorff's alpha scores ranged from 0.64 to 1.00). The one exception was the "tone" item which had an unacceptably low Krippendorff's alpha score average of 0.48. This item included four measurements; a measurement of placement (one tone appeared before or after the opposite tone) and emphasis (minor,

mixed or major) for positive tone and negative tone. As a result of the low Krippendorff's alpha scores, all four tone measurements were removed from the analyses.

Table 3.1 lists the items used in the content analysis and their Krippendorff's alpha reliability scores. Although the tone items were not used in the analysis, their Krippendorff's alpha scores are included in Table 3.1.

Table 3.1. Reliability testing results for items used in the study.

<b>Variable</b>	<b>Reliability Score*</b>
Background items:	
Story number	1.00
Newspaper	1.00
Month	0.97
Day	1.00
Year	1.00
Type	1.00
Section	0.92
Page number	0.88
Number of words	0.99
Affiliation of first author	0.83
Affiliation of second author	0.92
Wire service name	1.00
Source items:	
Government	0.72
Institutional	0.82
Environmental/scientific	0.92
Public/citizenry	0.75

Table 3.1. (cont.)

Academic	1.00
Union	0.78
Other	0.90
Thematic/Episodic frame:	
Thematic placement	0.66
Thematic emphasis	0.71
Episodic placement	0.84
Episodic emphasis	0.75
Pro-drilling frame:	
Placement	0.86
Total count	0.90
Emphasis	0.85
Anti-drilling frame:	
Placement	0.83
Total count	0.84
Emphasis	0.87
Positive tone:	
Placement	0.49
Emphasis	0.31
Negative tone:	
Placement	0.58
Emphasis	0.52
Consequence frame:	
Job creation	0.91
No job creation	0.00 (100%)
Reduced domestic energy costs	0.50 (94%)
No reduced domestic energy costs	0.65
Drilling will be expensive	0.00 (100%)
Drilling will not be expensive	0.00 (100%)
Reduced dependency on foreign oil	0.87
No reduced dependency on foreign oil	0.84
Environmental harm	0.79
No environmental harm	0.92

Table 3.1. (cont.)

Technology will reduce environmental harm	1.00
Technology will not reduce environmental harm	0.00 (98%)
Wilderness designation	0.00 (100%)
No wilderness designation	0.00 (100%)
More oil spills	0.99
Same or less oil spills	0.00 (100%)
Displacement of native peoples	0.00 (100%)
Significant oil/gas reserves	0.70
Insignificant oil/gas reserves	0.69
Significant profits for U.S./Alaska	0.86
Insignificant profits for U.S./Alaska	0.00 (96%)
Increased national security	0.69
No increase in national security	0.66
Hampers conservation/development of new fuels	0.50 (84%)
Improves conservation/development of new fuels	0.00 (98%)

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\* Based on Krippendorff's alpha. Numbers in parentheses are percent agreement scores and are reported in cases where Krippendorff's alpha was artificially low.

## Chapter 4

### RESULTS

This chapter is divided into six sections: (a) background information, (b) thematic and episodic frames, (c) consequence frames, (d) sources, (e) pro- and anti-drilling frames and (f) the extent to which editorials and news articles presented the same consequence frames.

#### *Background Information*

The sample consists of 214 news stories written about the ANWR drilling issue published between February 26, 2001 and March 26, 2003 in five newspapers including the *New York Times*, *Anchorage Daily News*, *Washington Post*, *Atlanta Journal-Constitution* and *USA Today*. Of these 214 news stories, 146 were news articles and 68 were editorials. Letters to the editor, advertisements, etc. were not included.

Table 4.1 gives background information about the news stories. The *Anchorage Daily News* had the highest number of news stories ( $N = 68$ , 32%) written about ANWR followed by the *New York Times* ( $N = 63$ , 29%), *Washington Post* ( $N = 47$ , 22%), *Atlanta Journal-Constitution* ( $N = 25$ , 12%) and *USA Today* ( $N = 11$ , 5%). As such, more than 60% of the sample was comprised of news articles from the *Anchorage Daily News* and the *New York Times*. The frequencies of each newspaper's news articles and editorials followed the same relative pattern as the frequencies for each newspaper's total news stories.

Nearly 70% of all ANWR news stories appeared in the first section of each newspaper; 75% of all ANWR news articles and 57% of all ANWR editorials appeared in

the first section of each newspaper as well. Only 12% of all ANWR news stories appeared in section three or higher of each newspaper.

More than 60% of all ANWR news stories were written by staff writers of each respective newspaper. Nearly 80% of all ANWR news articles were written by staff writers; 25% of all editorials were written by staff writers, 44% had no specified author, and nearly 31% were written by a wire service or another affiliation.

The average length of each newspaper story was approximately 800 words with the average length for each news article about 850 words and the average length for each editorial less than 700 words.

### ***Thematic and Episodic Frames***

Table 4.2 shows the extent to which newspaper stories emphasized thematic and episodic frames (H1). Thematic frames appeared in three-quarters of all newspaper stories, appeared as the minor emphasis in nearly half of all newspaper stories and appeared as the major emphasis in only in 7.5% of all newspaper stories. Conversely, episodic frames appeared in 99% of all newspaper stories, were represented as a minor emphasis in only 6.5% of all newspaper stories, and were the major emphasis in more than three-quarters of all newspaper stories.

There was support for H1; episodic frames were used more often than thematic frames in newspaper coverage of ANWR. To further investigate this hypothesis, a paired-samples *t* test was conducted based on the assumption that the data were interval rather ordinal in nature. Table 4.3 shows that the mean score for episodic frame emphasis ( $M =$

2.67,  $SD = .639$ ) was significantly greater ( $t = -16.41$ ,  $df = 213$ ,  $p < .001$ ) than the mean score for thematic frame emphasis ( $M = 1.06$ ,  $SD = .854$ ). There was also a significant inverse correlation between these two variables ( $r = -.860$ ,  $p < .001$ )—when episodic frames were a major emphasis, thematic frames were a minor emphasis and vice versa.

Table 4.2 also shows the extent to which each specific newspaper emphasized thematic and episodic frames in their news stories (RQ1). Episodic frames appeared as a major emphasis in more than 70% of the new stories in the *Anchorage Daily News*, *New York Times*, and *Washington Post* (episodic frames as a major emphasis appeared most frequently in the *Anchorage Daily News*). Conversely, thematic frames either did not appear or appeared as a minor emphasis in more than 70% of these three newspapers' news stories. Episodic frames as a major emphasis appeared 60% of the time in the *Atlanta-Journal Constitution* and 54% of the time in *USA Today*. It should be noted however, that the sample size for *USA Today* was considerably smaller than the other newspapers in the sample.

The answer to RQ1 as shown in Table 4.2 is that all the newspapers in the sample—with the exception of *USA Today*—used episodic frames more frequently than thematic frames in their coverage of ANWR. In addition, a paired-samples  $t$  test compared each specific newspaper's thematic and episodic content. Table 3.4 presents the results of these tests. The mean score for episodic frame emphasis was significantly greater ( $p < .001$ ) than the mean score for thematic frame emphasis in the *Anchorage Daily News*, *New York Times* and *Washington Post*. The mean score for episodic frame emphasis was also significantly greater ( $p < .05$ ) than the mean score for thematic frame

emphasis in the *Atlanta Journal-Constitution*. However, the mean score for episodic frame emphasis was not significantly greater ( $p < .40$ ) than the mean score for thematic frame emphasis in *USA Today*.

### ***Consequence Frames***

RQ2 asks which types of consequence frames were used most commonly in newspaper stories of ANWR (see Table 4.4). In this table, each consequence frame is presented on four levels: not cited, cited affirmative, cited opposite and cited both. An “affirmative citation” of a consequence frame meant that it was cited as it appears in the column on the right-hand side of table 3.5 (i.e., the consequence frame “drilling in ANWR will create jobs” was cited in 20.6% of all newspaper stories). Conversely, an “opposite citation” of a consequence frame meant that the inverse of the frame listed in the column on the right-hand side of table 4.4 was cited (i.e., the consequence frame “drilling in ANWR will not create jobs” was cited in 0.5% of all newspaper stories).

Results show that 10 of the 13 consequence frames were not cited in at least three-quarters of all newspaper stories, and that seven of these 10 consequence frames were not cited in at least nine out of 10 newspaper stories. Cited most infrequently were ANWR’s potential designation as an official wilderness area (not cited in 97.7% of all newspaper stories) and the potential disruption of people native to the intended drilling area in ANWR (not cited in 98.1% of all newspaper stories).

Three consequence frames were cited most frequently. The consequence frame dealing with the extent to which ANWR contains significant oil and natural gas reserves

was cited in 37% of the stories. This frame was cited affirmatively (i.e., ANWR contains significant oil and natural gas reserves) in 13.6% of all newspaper stories and cited oppositely (i.e., ANWR does not contain significant oil and natural gas reserves) in 15% of all newspaper stories. Additionally, both perspectives—affirmative and opposite—of this consequence frame were cited together in 8.9% of all newspaper stories.

The consequence frame representing the extent to which drilling in ANWR would reduce America's dependency on foreign oil was cited in 46.3% of all newspaper stories. This frame was cited affirmatively (i.e., drilling in ANWR will reduce America's dependency on foreign oil) in 27.1% of all newspaper stories and was cited oppositely (i.e., drilling in ANWR will not reduce America's dependency on foreign oil) in 11.2% of all newspaper stories. Both perspectives were cited in 7.9% of all newspapers stories.

The last consequence frame cited most frequently represented the extent to which drilling in ANWR would damage the natural environment. This frame was cited in 55.1% of all newspaper stories. The affirmative perspective of this frame (i.e., drilling in ANWR will harm the natural environment) was cited in 27.1% of all newspaper stories and the opposite perspective (i.e., drilling in ANWR will not harm the natural environment) was cited in 9.3% of all newspaper articles. More frequent than any other consequence frame, 18.7% of all newspaper stories presented both perspectives about the level of projected environmental damage.

Univariate Chi-square tests were conducted to test the distribution within each consequence frame (Table 4.4). The  $\chi^2$  values for all 13 consequence frames were statistically significant ( $p < .0005$ ) indicating an inequitable distribution among the four

different levels—not cited, cited affirmative, cited opposite, cited both—for each variable.

Tables 4.5 through 4.9 show the extent to which the 13 consequence frames were cited in each specific newspaper (RQ3). These tables are presented in the same format as Table 3.5 with statistical significance assessed by univariate Chi-square tests. (See each table for detailed information).

As expected, in general, the results for each newspaper indicate the same basic trends as described in the discussion of RQ2. Therefore rather than describe the specific results for each newspaper the following results address the same primary trends as discussed for RQ2.

Results show that 10 of the 13 consequence frames were not cited in more than 70% of each newspaper's stories (one exception is *USA Today* which cited the “create jobs” consequence frame in 36.4% of its stories.) Again, the same two consequence frames—ANWR as an official wilderness and the potential disruption of native peoples—were cited most infrequently.

The same three consequence frames—the extent to which ANWR contains significant oil and natural gas reserves, the extent to which drilling in ANWR will reduce America's dependence on foreign oil and the extent to which ANWR will harm the natural environment—were cited most frequently. Four of the five newspapers cited the consequence frame dealing with the extent to which ANWR contains significant oil and natural gas reserves in more than 36% of their stories. The *New York Times* cited this consequence frame most frequently (46% of its stories) and the *Washington Post* cited

this consequence frame least often (17% of its stories). *USA Today* cited this consequence frame in 64% of its stories, but the small sample size inhibits the extent to which we can consider this result. The *Anchorage Daily News* cited this frame affirmatively (i.e., ANWR does contain significant oil and natural gas reserves) most frequently (23.5% of its stories) and the *Atlanta Journal-Constitution* cited the opposite of this frame (i.e., ANWR does not contain significant oil and natural gas reserves) most frequently (24% of its stories). It should also be noted that the *New York Times* cited the opposite perspective of this frame in 22% of its stories. Excluding *USA Today* due to its small sample size, both perspectives of this frame—affirmative and opposite—were cited together most frequently by the *New York Times* (14.3% of its stories). Additionally, despite citing this consequence frame in 36% of its stories, the *Atlanta Journal-Constitution* never cited both perspectives in the same story. Two papers shared the greatest disparity between citing the affirmative and opposite perspectives of this frame: the *Anchorage Daily News* cited the affirmative perspective 13% more than the opposite perspective and the *New York Times* cited the opposite perspective 13% more than the affirmative perspective.

All five newspapers cited the consequence frame regarding the extent to which drilling in ANWR would reduce dependency on foreign oil in at least 37% of their articles. The *Atlanta Journal-Constitution* cited this consequence frame most frequently (64% of its stories) and, excluding *USA Today*, the *Anchorage Daily News* and *New York Times* cited it most infrequently (43% of its stories). All five newspapers cited the affirmative perspective of this consequence frame (i.e., drilling in ANWR will reduce America's dependency on foreign oil) more frequently than the opposite perspective (i.e.,

drilling in ANWR will not reduce America's dependency on foreign oil). The *Atlanta Journal-Constitution* cited the affirmative perspective most frequently (48% of its stories), and consequently had the greatest disparity between citing the affirmative and opposite perspectives of the frame; the affirmative perspective was cited 44% more than the opposite perspective. The *New York Times* cited the opposite perspective most frequently (16% of its stories) and also had the smallest disparity between citing the affirmative and opposite perspective of this frame; the affirmative perspective was cited only 2% more than the opposite perspective. Both perspectives of this consequence frame were cited most frequently by the *Atlanta Journal-Constitution* (12% of its stories) and *USA Today* never cited both perspectives in the same story.

The consequence frame representing the extent to which drilling in ANWR would damage the natural environment was cited most frequently by each newspaper; it was cited in at least half of each newspaper's stories. The *Atlanta Journal-Constitution* and *USA Today* both cited this frame most frequently (64% of their stories) and the *Anchorage Daily News* cited this frame least often (50% of its stories). All five newspapers cited the affirmative perspective (i.e., drilling in ANWR will harm the natural environment) more frequently than the opposite perspective (i.e., drilling in ANWR will not harm the natural environment). Excluding *USA Today*, the *New York Times* cited the affirmative perspective most frequently (35% of its stories). Conversely, the *Anchorage Daily News* cited the opposite perspective most frequently (15% of its articles). Notably, *USA Today* never cited the opposite perspective. More so than any other consequence frame, both perspectives of this frame—affirmative and opposite—

were cited most frequently in each newspaper's stories; both perspectives of this frame were cited in at least 14% of each newspaper's stories. The *Atlanta Journal-Constitution* cited both perspectives most frequently (27% of its stories). The *Anchorage Daily News* had the smallest disparity in citing the affirmative and positive perspectives; the affirmative perspective was cited only 4% more often than the opposite perspective. Conversely, excluding *USA Today*, the *New York Times* had the largest disparity between citing the affirmative and opposite perspectives; the affirmative perspective was cited 29% more often than the opposite perspective.

Univariate Chi-square tests were conducted to assess the distribution within each consequence frame for each newspaper (Table 4.5 through Table 4.9). Although included in Table 4.9, the Chi-square test results for *USA Today* are excluded from the following discussion since the sample was so small. Excluding two exceptions, 10 of the 13 consequence frames had significant Chi-square values ( $p < .0005$ ) for each newspaper. The exceptions were as follows: the "create jobs" consequence frame was significant at  $p < .05$  in the *Atlanta Journal-Constitution*, and one consequence frame for the *New York Times* and the *Washington Post* was never cited. The Chi-square values for the three most frequently cited consequence frames are discussed next.

The Chi-square value for the "contains significant oil and gas reserves" frame was significant ( $p < .0005$ ) for every paper (except *USA Today*). The Chi-square value for the "drilling in ANWR will reduce America's dependency on foreign oil" frame was significant for every paper (except *USA Today*). The Chi-square value for the "environmental harm" consequence frame was significant for the *Anchorage Daily News*

( $p < .0005$ ), *New York Times* ( $p < .0005$ ) and *Washington Post* ( $p < .01$ ). No significant difference was found for this frame in the *Atlanta Journal-Constitution* or *USA Today*. In sum, even though these three consequence frames were cited more frequently than the other 10 consequence frames in each newspaper, the observed frequencies for the “not cited” levels of these three consequence frames were also higher than expected, and consequently the observed frequencies for the other three levels—cited affirmative, cited opposite and cited both—were lower than expected.

### ***Sources***

Data on the sources used in the overall sample appear in Table 4.10. H2a was supported; government sources were cited most frequently, appearing in more than three-quarters of all newspaper stories. Environmental sources were the second most frequently cited source appearing in more than one-third of the newspaper stories and institutional sources were the third most frequently cited source appearing in nearly one-fifth of the newspaper stories. As a result, H2b was not supported; next to governmental sources, environmental sources were used more commonly than institutional sources. Sources categorized as “other” were cited in more than 10% of all newspaper stories and public, academic and union sources were each cited in less than seven percent of all newspaper stories.

Every source was cited two or more times in less than 10% of the newspaper stories with the exception of government sources which were cited twice or more in over

50% of the newspaper stories. Environmental sources were cited two or more times second most frequently, but only in nine percent of the newspaper stories.

Univariate Chi-square tests were conducted to assess the distribution within each source (Table 4.10). The Chi-square values were significant ( $p < .0005$ ) for all seven sources. With the exception of government sources, each source was not cited or cited less frequently than expected. Conversely, government sources were cited more frequently than expected.

Tables 4.11 through 4.15 address RQ4 and show the extent to which the sources were cited in each specific newspaper. As expected, in general, the results for each newspaper indicated the same basic trends described in the discussion of H2a and H2b. Therefore rather than describe all of the specific results for each newspaper, the following section addresses the same primary trends.

With the exception of the *New York Times*, all the newspapers cited government sources in more than 80% of their stories. The *Washington Post* cited government sources most frequently (85% of its stories) and the *New York Times* cited government sources least (65% of its stories). Every paper cited government sources two or more times in at least 49% of their stories. The *Atlanta Journal-Constitution* cited government sources two or more times most frequently (64% of its stories) and the *New York Times* cited government sources two or more times least (49% of its stories).

Each newspaper cited at least one environmental source in 30% of its stories. The *Atlanta Journal-Constitution* cited environmental sources most frequently (44% of its stories) and the *Anchorage Daily News* cited environmental sources least commonly

(30% of their stories). The *Atlanta Journal-Constitution* also cited environmental sources two or more times most frequently (16% of its stories) and, excluding *USA Today* which never cited environmental sources two or more times in any of its stories, the *Anchorage Daily News* cited environmental sources two or more times least (7% of its stories).

Overall, the largest disparity between citing government and environmental sources was in the *Anchorage Daily News* which cited governmental sources 50% more often than environmental sources. Conversely, the smallest disparity appeared in the *New York Times* which cited government sources 29% more often than environmental sources.

Institutional sources were cited most frequently in the *New York Times* (21% of its stories). Public and academic sources were cited most frequently in the *Atlanta Journal-Constitution* (12% and 16% of its stories respectively). The *New York Times* cited union sources most frequently (8% of its stories), and other sources were cited most frequently in the *Anchorage Daily News* (15% of its stories).

The Chi-square values were statistically significant—although sometimes at different levels—for all sources in all papers with the exception of *USA Today* which had insignificant Chi-square values for government and environmental sources. As expected, the Chi-square results for sources in each paper were consistent with the Chi-square results for sources in the overall sample; with the exception of government sources which were cited more frequently by each paper than expected, each paper cited each source less frequently than expected.

### *Drilling Perspective*

As previously mentioned, measures of positive and negative tone were dropped from the analysis due to their low intercoder reliability (the average Krippendorff alpha was 0.48). Therefore RQ7, which looked at which overall tone—positive or negative—was presented in newspaper stories about ANWR could not be answered. However, the reliability was acceptable for the related research questions (RQ5 and RQ6) which assessed which drilling perspective—pro or anti—was presented most frequently in newspaper stories about ANWR.

Table 4.16 shows that overall the pro- and anti-drilling frames were cited similarly: neither frame appeared in a quarter of the stories; both frames appeared as a mixed emphasis in nearly one-third of the stories; the anti-drilling frame was cited slightly more as the minor emphasis (17% of the stories) than the pro-drilling frame (9% of the stories); and the pro-drilling frame was cited slightly more as the major emphasis (33% of the stories) than the anti-drilling frame (27% of the stories).

These results show that neither drilling perspective—pro or anti—was used more frequently than the other in the overall sample. To further assess this research question a paired-samples *t* test was calculated (see Table 4.17). The analysis revealed no statistically significant difference ( $p < .504$ ) between the mean score for pro-drilling emphasis ( $M = 1.73$ ,  $SD = 1.18$ ) and the mean score for anti-drilling emphasis ( $M = 1.64$ ,  $SD = 1.12$ ).

Table 3.17 also shows the extent to which each newspaper emphasized pro- and anti-drilling frames in their news stories (RQ6). In general, the *Washington Post*, *Atlanta*

*Journal-Constitution* and *USA Today* used pro- and anti-drilling frames equitably. Each newspaper placed a mixed emphasis on pro-and anti-drilling frames in at least 35% of their stories with the exception of the *Anchorage Daily News* which placed a mixed emphasis on pro-and anti-drilling frames in 25% of their stories.

The *New York Times* and the *Anchorage Daily News* used pro- and anti-drilling frames inequitably. Pro-drilling frames appeared as a major emphasis most frequently in the *Anchorage Daily News* (50% of its stories) and least in the *New York Times* (13% of its stories). Conversely, anti-drilling frames appeared as a major emphasis most frequently in the *New York Times* (41% of its stories) and least in the *Anchorage Daily News* (19% of its stories). Furthermore, pro-drilling frames appeared least often in the *New York Times* (62% of its stories) and anti-drilling frames appeared least in the *Anchorage Daily News* (66% of its stories). In sum, these results show that *New York Times* stories favored anti-drilling frames and *Anchorage Daily News* stories favored pro-drilling frames.

To further assess this finding, a paired-samples *t* test compared each newspaper's emphasis on pro- and anti-drilling frames. Table 4.17 lists the results of these tests. There were no statistically significant differences between the mean score for pro-drilling emphasis and the mean score for anti-drilling emphasis in the *Washington Post*, *Atlanta Journal-Constitution* and *USA Today*. However, the mean score for pro-drilling frames ( $M = 2.06$ ,  $SD = 1.16$ ) was significantly greater ( $p < .005$ ) than the mean score for anti-drilling frames ( $M = 1.29$ ,  $SD = 1.13$ ) in the *Anchorage Daily News* and the mean score for anti-drilling emphasis ( $M = 2.06$ ,  $SD = 1.01$ ) was significantly greater ( $p < .001$ ) than

the mean score for pro-drilling emphasis ( $M = 1.22$ ,  $SD = 1.09$ ) in the *New York Times*. The results of these  $t$  tests further illustrate that the *New York Times* used significantly more anti-drilling frames and that the *Anchorage Daily News* used significantly more pro-drilling frames.

### ***Consequence Frames in Articles and Editorials***

Table 4.18 addresses RQ8 and compares how consequence frames were used in news articles and editorials. Bivariate Chi-square tests were conducted to address this relationship. Chi-square tests revealed that there was no statistically significant difference in how editorials and news articles used 9 of the 13 consequence frames. In other words, these nine consequence frames were represented similarly in editorials and news articles. Conversely, Chi-square tests revealed that there was a significant difference in how editorials and news articles treated 4 of the 13 consequence frames. A discussion of these four consequence frames follows.

Newspaper articles used the “create jobs” consequence frame significantly more ( $p < .05$ ) than editorials. More specifically, newspaper articles cited the create jobs consequence frame affirmatively (i.e., drilling in ANWR will create jobs) significantly more than editorials. There was a significant difference ( $p < .05$ ) between how newspaper articles and editorials cited the “reduce domestic energy costs” consequence frame. Articles cited this frame affirmatively (i.e., drilling in ANWR will reduce domestic energy costs) more frequently than editorials and editorials cited the opposite of this

frame (i.e., drilling in ANWR will not reduce domestic energy costs) more frequently than articles.

The two consequence frames that were used most divergently by articles and editorials were “ANWR contains significant oil” and “reduce dependency on foreign oil.” There was a significant difference ( $p < .0005$ ) between how articles and editorials used the “contains significant reserves” consequence frame. Editorials cited this frame’s opposite perspective (i.e., ANWR does not contain significant reserves) significantly more often than articles and articles cited both perspectives of this frame—affirmative and opposite—significantly more often than editorials. Lastly, Chi-square tests revealed a significant difference ( $p < .0005$ ) between how articles and editorials cited the “reduce dependency on foreign oil” consequence frame. Articles cited the affirmative perspective (i.e., drilling in ANWR will reduce America’s dependence on foreign oil) more often than editorials and, conversely, editorials cited the opposite perspective (i.e., drilling in ANWR will not reduce America’s dependency on foreign oil) more often than articles.

In sum, for the four consequence frames with significant Chi-square values, newspaper articles favored the affirmative perspectives and editorials favored the opposite perspectives. More specifically, for these four consequence frames, newspaper articles privileged pro-drilling consequence frames and editorials privileged anti-drilling consequence frames.

Table 4.1. Background information for articles used in content analysis.<sup>1</sup>

	<b><u>Type of News Story</u></b>		
	<b>All News Stories (N = 214)</b>	<b>News Articles Only (N = 146)</b>	<b>Editorials Only (N = 68)</b>
<b>Characteristic:</b>			
<b>Newspaper<sup>2</sup>:</b>			
<i>Anchorage Daily News</i>	31.8	31.5	32.4
<i>New York Times</i>	29.4	30.1	27.9
<i>Washington Post</i>	22.0	23.3	19.1
<i>Atlanta Journal-Constitution</i>	11.7	9.6	16.2
<i>USA Today</i>	5.1	5.5	4.4
<b>Section of paper:</b>			
Section 1	69.6	75.3	57.4
Section 2	18.2	11.0	33.8
Section 3 or higher (also unknown)	12.1	13.7	8.8
<b>First author affiliation:</b>			
No author or no affiliation	21.0	10.3	44.1
Staff writer	62.1	79.5	25.0
Wire service or other affiliation	16.8	10.3	30.9
<b>Mean no. of words (SD):</b>	798.37 (431.27)	849.75 (487.03)	688.04 (244.63)

<sup>1</sup> Data in columns are percents. Data for number of words are means with SDs in parentheses. The sum of the percents may not equal 100 due to rounding.

<sup>2</sup> *Anchorage Daily News*, N = 68, *New York Times*, N = 63; *Washington Post*, N = 47, *Atlanta Journal-Constitution*, N = 25, *USA Today*, N = 11.

Table 4.2. Percentage of thematic and episodic frames in content analysis.

	<b><u>Type of Frame:</u></b>	
	<b>Thematic (%)</b>	<b>Episodic (%)</b>
<b>Newspaper:</b>		
<b>All Articles:</b> (N=214)		
Frame does not appear	26.2	0.9
Minor emphasis	49.5	6.5
Mixed emphasis	16.8	16.8
Major emphasis	7.5	75.7
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>Anchorage Daily News:</b> (N = 68)		
Frame does not appear	36.8	0
Minor emphasis	51.5	2.9
Mixed emphasis	8.8	8.8
Major emphasis	2.9	88.2
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>New York Times:</b> (N = 63)		
Frame does not appear	22.2	0
Minor emphasis	49.2	4.8
Mixed emphasis	23.8	23.8
Major emphasis	4.8	71.4
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>Washington Post:</b> (N = 47)		
Frame does not appear	31.9	0
Minor emphasis	44.7	8.5
Mixed emphasis	14.9	14.9
Major emphasis	8.5	76.6
<u>TOTAL</u>	<u>100</u>	<u>100</u>

Table 4.2. (cont.)

***Atlanta Journal-Constitution:***

(*N* = 25)

Frame does not appear	4.0	4.0
Minor emphasis	56.0	12.0
Mixed emphasis	24.0	24.0
Major emphasis	16.0	60.0
<u>TOTAL</u>	<u>100</u>	<u>100</u>

***USA Today:***

(*N* = 11)

Frame does not appear	9.1	9.1
Minor emphasis	45.5	18.2
Mixed emphasis	18.2	18.2
Major emphasis	27.3	54.4
<u>TOTAL</u>	<u>100</u>	<u>100</u>

Table 4.3. Results of *t* tests for thematic and episodic frames in content analysis.

<b>Paired-samples <i>t</i> test results:</b>					
	<b>Mean (SD) Episodic</b>	<b>Mean(SD) Thematic</b>	<b><i>t</i></b>	<b><i>df</i></b>	<b><i>p</i></b>
<b>Newspaper:</b>					
<b>All Articles:</b> ( <i>N</i> = 214)	2.67(0.64)	1.06(0.85)	-16.41	213	<i>p</i> < .001
<b><i>Anchorage Daily News:</i></b> ( <i>N</i> = 68)	2.85(0.43)	0.78(0.73)	-15.59	67	<i>p</i> < .001
<b><i>New York Times:</i></b> ( <i>N</i> = 63)	2.67(0.57)	1.11(0.81)	-9.29	62	<i>p</i> < .001
<b><i>Washington Post:</i></b> ( <i>N</i> = 47)	2.68(0.63)	1.00(0.91)	-7.73	46	<i>p</i> < .001
<b><i>Atlanta Journal-Constitution:</i></b> ( <i>N</i> = 25)	2.40(0.87)	1.52(0.82)	-2.64	24	<i>p</i> < .05
<b><i>USA Today:</i></b> ( <i>N</i> = 11)	2.18(1.11)	1.64(1.03)	-0.88	10	<i>p</i> < .40

Table 4.4. Percentage of consequence frames in content analysis.

Consequence type: ( <i>N</i> = 214)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	78.0	20.6	0.5	0.9	343.6*****
Reduce domestic energy costs	89.7	5.6	4.2	0.5	479.3*****
Drilling will be expensive	95.3	2.8	0.9	0.9	564.7*****
Reduce dependency on foreign oil	53.7	27.1	11.2	7.9	112.3*****
Will harm the environment	44.9	27.1	9.3	18.7	58.5*****
Technology will reduce environmental harm	86.0	21.1	0.9	0.9	431.6*****
ANWR should be an official wilderness	97.7	1.9	0.5	0.0	398.8*****
Increased oil spills	92.1	5.1	1.4	1.4	514.0*****
Disruption of native peoples	98.1	1.9	0.0	0.0	198.3*****
Contains significant reserves	62.6	13.6	15.0	8.9	152.2*****
Will generate significant domestic profits	89.7	10.3	0.0	0.0	135.0*****
Bolster national security	94.9	3.7	1.4	0.0	365.0*****
Hampers alternative fuel development/conservation	95.3	4.2	0.5	0.0	370.7*****

\*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

Table 4.5. Percentage of consequence frames in *Anchorage Daily News*.

Consequence type: ( <i>N</i> = 68)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	77.9	20.6	0.0	1.5	64.5*****
Reduce domestic energy costs	94.1	4.4	1.5	0.0	112.9*****
Drilling will be expensive	95.6	2.9	1.5	0.0	118.4*****
Reduce dependency on foreign oil	57.4	25.0	8.8	8.8	42.7*****
Will harm the environment	50.0	19.1	14.7	16.2	22.9*****
Technology will reduce environmental harm	85.3	13.2	0.0	1.5	83.9*****
ANWR should be an official wilderness	97.1	2.9	0.0	0.0	60.2*****
Increased oil spills	91.2	7.4	0.0	1.5	102.6*****
Disruption of native peoples	97.1	2.9	0.0	0.0	60.2*****
Contains significant reserves	60.3	23.5	10.3	5.9	49.8*****
Will generate significant domestic profits	77.9	22.1	0.0	0.0	21.3*****
Bolster national security	92.6	4.4	2.9	0.0	107.5*****
Hampers alternative fuel development/conservation	98.5	1.5	0.0	0.0	64.1*****

\*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

Table 4.6. Percentage of consequence frames in *New York Times*.

Consequence type: ( <i>N</i> = 63)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	74.6	22.1	1.6	1.6	89.6*****
Reduce domestic energy costs	87.3	6.3	6.3	0.0	82.6*****
Drilling will be expensive	95.2	3.2	0.0	1.6	108.7*****
Reduce dependency on foreign oil	57.1	17.5	15.9	9.5	35.5*****
Will harm the environment	44.4	34.9	6.3	14.3	23.6*****
Technology will reduce environmental harm	85.7	9.5	3.2	1.6	124.4*****
ANWR should be an official wilderness	100.0	0.0	0.0	0.0	0.0
Increased oil spills	95.2	3.2	1.6	0.0	43.5*****
Disruption of native peoples	98.4	1.6	0.0	0.0	59.1*****
Contains significant reserves	54.0	9.5	22.2	14.3	30.2*****
Will generate significant domestic profits	96.8	3.2	0.0	0.0	55.3*****
Bolster national security	98.4	1.6	0.0	0.0	59.1*****
Hampers alternative fuel development/conservation	98.4	1.6	0.0	0.0	59.1*****

\*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

Table 4.7. Percentage of consequence frames in *Washington Post*.

Consequence type: ( <i>N</i> = 63)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	89.4	10.6	0.0	0.0	29.1*****
Reduce domestic energy costs	93.6	2.1	4.3	0.0	76.7*****
Drilling will be expensive	95.7	4.3	0.0	0.0	34.2*****
Reduce dependency on foreign oil	51.1	31.9	12.8	4.3	24.5*****
Will harm the environment	44.7	23.4	8.5	23.4	12.4**
Technology will reduce environmental harm	87.2	12.8	0.0	0.0	26.1*****
ANWR should be an official wilderness	95.7	4.3	0.0	0.0	39.3*****
Increased oil spills	91.5	4.3	2.1	2.1	110.9*****
Disruption of native peoples	100.0	0.0	0.0	0.0	0.0
Contains significant reserves	83.0	4.3	4.3	8.5	84.1*****
Will generate significant domestic profits	97.9	2.1	0.0	0.0	43.1*****
Bolster national security	93.6	6.4	0.0	0.0	35.8*****
Hampers alternative fuel development/conservation	89.4	8.5	2.1	0.0	66.6*****

\*\*  $p < 01$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

Table 4.8. Percentage of consequence frames in *Atlanta Journal-Constitution*.

Consequence type: (N = 25)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	72.0	28.0	0.0	0.0	4.8*
Reduce domestic energy costs	72.0	16.0	8.0	4.0	29.9*****
Drilling will be expensive	92.0	4.0	4.0	0.0	38.9*****
Reduce dependency on foreign oil	36.0	48.0	4.0	12.0	12.5**
Will harm the environment	36.0	28.0	8.0	28.0	4.3
Technology will reduce environmental harm	84.0	16.0	0.0	0.0	11.6*****
ANWR should be an official wilderness	96.0	4.0	0.0	0.0	21.2*****
Increased oil spills	92.0	8.0	0.0	0.0	17.6*****
Disruption of native peoples	96.0	4.0	0.0	0.0	21.2*****
Contains significant reserves	64.0	12.0	24.0	0.0	18.3*****
Will generate significant domestic profits	92.0	8.0	0.0	0.0	17.6*****
Bolster national security	92.0	4.0	4.0	0.0	51.7*****
Hampers alternative fuel development/conservation	96.0	4.0	0.0	0.0	21.2*****

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

Table 4.9. Percentage of consequence frames in *USA Today*.

Consequence type: ( <i>N</i> = 11)	Number of times cited:				$\chi^2$
	Not Cited	Cited Affirmative	Cited Opposite	Both Cited	
Create jobs	63.6	36.4	0.0	0.0	0.8
Reduce domestic energy costs	100.0	0.0	0.0	0.0	0.0
Drilling will be expensive	100.0	0.0	0.0	0.0	0.0
Reduce dependency on foreign oil	63.3	27.3	9.1	0.0	5.0
Will harm the environment	36.4	45.5	0.0	18.2	1.3
Technology will reduce environmental harm	90.9	9.1	0.0	0.0	7.4*
ANWR should be an official wilderness	100.0	0.0	0.0	0.0	0.0
Increased oil spills	81.8	0.0	9.1	9.1	11.5***
Disruption of native peoples	100.0	0.0	0.0	0.0	0.0
Contains significant reserves	36.4	18.2	27.3	18.2	1.0
Will generate significant domestic profits	81.8	18.2	0.0	0.0	4.5*
Bolster national security	100.0	0.0	0.0	0.0	0.0
Hampers alternative fuel development/conservation	81.8	18.2	0.0	0.0	4.5*

\*  $p < 05$ . \*\*\*  $p < .005$  based on  $\chi^2$  test.

Table 4.10. Percentage of sources in content analysis.

<b>Source:</b> ( <i>N</i> = 214)	<b>Number of times cited:</b>				$\chi^2$
	<b>Not Cited<sup>1</sup></b>	<b>Cited Once<sup>1</sup></b>	<b>Cited Twice or More<sup>1</sup></b>	<b>Mean No. Cites (<i>SD</i>)</b>	
Government Source	22.4	23.8	53.7	1.31(0.82)	40.2*****
Institutional Source	82.2	11.7	6.1	0.24(0.56)	231.6*****
Environmental Source	64.5	26.6	8.9	0.44(0.65)	103.7*****
Public Source	94.4	2.3	3.3	0.09(0.38)	359.2*****
Academic Source	93.5	5.6	0.9	0.08(0.29)	349.0*****
Union Source	93.9	4.7	1.4	0.08(0.31)	354.0*****
Other Source	89.3	7.5	3.3	0.14(0.43)	301.7*****

\*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.11. Percentage of sources in *Anchorage Daily News*.

<b>Source:</b> ( <i>N</i> = 68)	<b>Number of times cited:</b>				$\chi^2$
	<b>Not Cited<sup>1</sup></b>	<b>Cited Once<sup>1</sup></b>	<b>Cited Twice or More<sup>1</sup></b>	<b>Mean No. Cites (<i>SD</i>)</b>	
Government Source	19.1	27.9	52.9	1.34(0.78)	12.5*****
Institutional Source	79.4	10.3	10.3	0.31(0.65)	64.4*****
Environmental Source	70.6	22.1	7.4	0.37(0.62)	44.6*****
Public Source	94.1	4.4	1.5	0.07(0.31)	112.9*****
Academic Source	95.6	4.4	0.0	0.04(0.21)	56.6*****
Union Source	94.1	4.4	1.5	0.07(0.32)	112.9*****
Other Source	85.3	5.9	8.8	0.24(0.61)	82.6*****

\*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.12. Percentage of sources in *New York Times*.

Source: ( <i>N</i> = 63)	Number of times cited:			Mean No. Cites ( <i>SD</i> )	$\chi^2$
	Not Cited <sup>1</sup>	Cited Once <sup>1</sup>	Cited Twice or More <sup>1</sup>		
Government Source	34.9	15.9	49.2	1.14(0.91)	0.6***
Institutional Source	81.0	14.3	4.8	0.24(0.53)	65.2*****
Environmental Source	63.5	27.0	9.5	0.46(0.67)	28.7*****
Public Source	96.8	0.0	3.2	0.06(0.35)	55.2*****
Academic Source	93.7	4.8	1.6	0.08(0.34)	103.3*****
Union Source	92.1	7.9	0.0	0.08(0.27)	44.6*****
Other Source	88.9	11.1	0.0	0.11(0.32)	38.1*****

\*\*\*  $p < .005$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.13. Percentage of sources in *Washington Post*.

Source: ( <i>N</i> = 47)	Number of times cited:			Mean No. Cites ( <i>SD</i> )	$\chi^2$
	Not Cited <sup>1</sup>	Cited Once <sup>1</sup>	Cited Twice or More <sup>1</sup>		
Government Source	14.9	29.8	55.3	1.40(0.74)	11.8***
Institutional Source	85.1	10.6	4.3	0.19(0.49)	56.9*****
Environmental Source	61.7	29.8	8.5	0.47(0.65)	20.2*****
Public Source	95.7	2.1	2.1	0.06(0.32)	82.2*****
Academic Source	95.7	4.3	0.0	0.04(0.20)	39.3*****
Union Source	95.7	2.1	2.1	0.06(0.32)	82.2*****
Other Source	93.6	6.4	0.0	0.06(0.25)	35.8*****

\*\*\*  $p < .005$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.14. Percentage of sources in *Atlanta Journal-Constitution*.

Source: ( <i>N</i> = 25)	Number of times cited:			Mean No. Cites ( <i>SD</i> )	$\chi^2$
	Not Cited <sup>1</sup>	Cited Once <sup>1</sup>	Cited Twice or More <sup>1</sup>		
Government Source	16.0	20.0	64.0	1.48(0.77)	10.7***
Institutional Source	84.0	16.0	0.0	0.16(0.37)	11.6*****
Environmental Source	56.0	28.0	16.0	0.60(0.76)	6.3*
Public Source	88.0	4.0	8.0	0.20(0.58)	33.8*****
Academic Source	84.0	16.0	0.0	0.16(0.37)	11.6*****
Union Source	96.0	4.0	0.0	0.04(0.20)	21.2*****
Other Source	92.0	8.0	0.0	0.08(0.28)	17.6*****

\*  $p < .05$ . \*\*\*  $p < .005$ . \*\*\*\*\*  $p < .001$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.15. Percentage of sources in *USA Today*.

<b>Source:</b> ( <i>N</i> = 11)	<b>Number of times cited:</b>				$\chi^2$
	<b>Not Cited<sup>1</sup></b>	<b>Cited Once<sup>1</sup></b>	<b>Cited Twice or More<sup>1</sup></b>	<b>Mean No. Cites (<i>SD</i>)</b>	
Government Source	18.2	27.3	54.5	1.36(0.81)	2.4
Institutional Source	90.9	0.0	9.1	0.18(0.60)	7.4**
Environmental Source	63.6	36.4	0.0	0.36(0.50)	0.8
Public Source	90.9	0.0	9.1	0.18(0.60)	7.4**
Academic Source	90.9	0.0	9.1	0.18(0.60)	7.4**
Union Source	90.9	0.0	9.1	0.18(0.60)	7.4**
Other Source	90.9	0.0	9.1	0.18(0.60)	7.4**

\*\*  $p < .01$  based on  $\chi^2$  test.

<sup>1</sup> Column values represent valid percents.

Table 4.16. Percentage of pro- and anti-drilling frames in content analysis.

	<u>Type of Frame</u>	
	Pro-drilling (%)	Anti-drilling (%)
<b>Newspaper:</b>		
<b>All Articles:</b> (N=214)		
Frame does not appear	25.7	23.4
Minor emphasis	8.9	16.8
Mixed emphasis	32.2	32.2
Major emphasis	33.2	27.1
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>Anchorage Daily News:</b> (N=68)		
Frame does not appear	19.1	33.8
Minor emphasis	5.9	22.1
Mixed emphasis	25.0	25.0
Major emphasis	50.0	19.1
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>New York Times:</b> (N=63)		
Frame does not appear	38.1	12.9
Minor emphasis	14.1	9.8
Mixed emphasis	35.7	35.7
Major emphasis	12.2	41.6
<u>TOTAL</u>	<u>100</u>	<u>100</u>
<b>Washington Post:</b> (N=47)		
Frame does not appear	23.4	25.5
Minor emphasis	6.4	14.9
Mixed emphasis	36.2	36.2
Major emphasis	34.0	23.4
<u>TOTAL</u>	<u>100</u>	<u>100</u>

Table 4.16. (cont.)

***Atlanta Journal Constitution:***

(N=25)

Frame does not appear	16.0	20.0
Minor emphasis	8.0	24.0
Mixed emphasis	36.0	36.0
Major emphasis	40.0	20.0
<u>TOTAL</u>	<u>100</u>	<u>100</u>

***USA Today:***

(N=11)

Frame does not appear	27.3	18.2
Minor emphasis	9.1	18.2
Mixed emphasis	36.4	36.4
Major emphasis	27.3	27.3
<u>TOTAL</u>	<u>100</u>	<u>100</u>

Table 4.17. Results of *t* tests for pro- and anti-drilling frames in content analysis.

<b><u>Paired-samples <i>t</i> test results:</u></b>					
	<b>Mean (SD) Pro-drilling</b>	<b>Mean (SD) Anti-drilling</b>	<b><i>t</i></b>	<b><i>df</i></b>	<b><i>p</i></b>
<b>Newspaper:</b>					
<b>All Articles:</b> ( <i>N</i> = 214)	1.73(1.18)	1.64(1.12)	-0.67	213	<i>p</i> < .504
<b>Anchorage Daily News:</b> ( <i>N</i> = 68)	2.06(1.16)	1.29(1.13)	3.04	67	<i>p</i> < .005
<b>New York Times:</b> ( <i>N</i> = 63)	1.22(1.09)	2.06(1.01)	-3.79	62	<i>p</i> < .001
<b>Washington Post:</b> ( <i>N</i> = 47)	1.81(1.15)	1.57(1.12)	0.79	46	<i>p</i> < .434
<b>Atlanta Journal- Constitution:</b> ( <i>N</i> = 25)	2.0(1.08)	1.56(1.04)	1.14	24	<i>p</i> < .268
<b>USA Today:</b> ( <i>N</i> = 11)	1.64(1.21)	1.72 (1.10)	-0.15	10	<i>p</i> < .882

Table 4.18. Percentage of consequence frames in news articles and editorials.

Consequence type:	Type of newspaper story:		$\chi^2$
	Newspaper Article (N = 146)	Newspaper Editorial (N = 68)	
<b>Create jobs:</b>			
Not cited	73.3	88.2	9.5*
Cited affirmative	25.3	10.3	
Cited opposite	0.0	1.5	
Cited both	1.4	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	
<b>Reduce domestic energy costs:</b>			
Not Cited	91.1	86.8	8.6*
Cited affirmative	6.8	2.9	
Cited opposite	2.1	8.8	
Cited both	0.0	1.5	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	
<b>Drilling will be expensive:</b>			
Not Cited	95.2	95.6	1.3
Cited affirmative	2.7	2.9	
Cited opposite	0.7	1.5	
Cited both	1.4	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	
<b>Reduce dependency on foreign oil:</b>			
Not Cited	56.2	48.5	34.8*****
Cited affirmative	31.5	17.6	
Cited opposite	2.7	29.5	
Cited both	9.6	4.4	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

Table 4.18. (cont.)

**Will harm the environment:**

Not Cited	43.8	47.1	6.7
Cited affirmative	26.7	27.9	
Cited opposite	6.8	14.7	
Cited both	22.6	10.3	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Technology will reduce environmental harm:**

Not Cited	86.3	85.3	5.2
Cited affirmative	12.3	11.8	
Cited opposite	0.0	2.9	
Cited both	1.4	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**ANWR should be an official wilderness:**

Not Cited	97.9	97.1	2.2
Cited affirmative	2.1	1.5	
Cited opposite	0.0	1.5	
Cited both	0.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Increased oil spills:**

Not Cited	92.5	91.2	3.2
Cited affirmative	4.8	5.9	
Cited opposite	0.7	2.9	
Cited both	2.1	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Disruption of native peoples:**

Not Cited	99.3	95.6	3.5
Cited affirmative	0.7	4.4	
Cited opposite	0.0	0.0	
Cited both	0.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

Table 4.18. (cont.)

**Contains significant reserves:**

Not Cited	63.0	61.8	17.9*****
Cited affirmative	14.4	11.8	
Cited opposite	9.6	26.5	
Cited both	13.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Will generate significant domestic profits:**

Not Cited	90.4	88.2	0.24
Cited affirmative	9.6	11.8	
Cited opposite	0.0	0.0	
Cited both	0.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Bolster national security:**

Not Cited	94.5	95.6	3.1
Cited affirmative	4.8	1.5	
Cited opposite	0.7	2.9	
Cited both	0.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

**Hampers alternative fuel development/conservation:**

Not Cited	95.2	95.6	0.48
Cited affirmative	4.1	4.4	
Cited opposite	0.7	0.0	
Cited both	0.0	0.0	
<u>TOTAL%</u>	<u>100</u>	<u>100</u>	

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\*  $p < .05$ . \*\*\*\*\*  $p < .0005$  based on  $\chi^2$  test.

## Chapter 5

### CONCLUSION

This chapter contains three sections: a discussion of the study's findings, how they compliment existing literature and what they imply for future research; limitations to the study; and a conclusion.

#### **Discussion and Implications for Future Research**

##### ***Background Information***

Newspaper coverage of ANWR was examined for several reasons, most importantly of which were its longevity (the debate over whether to open ANWR to drilling has raged off and on for more than forty years), timeliness, and its burgeoning symbolism as a critical environmental and political issue for the United States. Two results substantiated the classification of ANWR as an important issue. First, only one LEXIS-NEXIS™ search of the five newspapers used in the sample was needed to generate a large number of ANWR stories ( $N = 214$ ). Second, nearly 70% of all the ANWR stories used in this study appeared in the first section of the newspapers, a result that supports Hall's (2001, as cited in Friedman, 2004) assertion that in addition to other anti-environmental actions, President Bush's efforts to open ANWR to drilling was responsible for reclaiming space for environmental issues on the front page of large newspapers. Not only have a large number of ANWR-related newspaper stories been written recently, but these stories have frequently run in the first section; findings that

show ANWR—as far as environmental issues go—has garnered high-profile attention in major U.S. newspapers.

Another interesting background finding was apparent in the breakdown of the sample. The *Anchorage Daily News* published the largest number of ANWR-related stories (nearly one-third) of the sample. Although perhaps a logical expectation, it is worth noting since this finding illustrated that geographical proximity played a significant role in the attention the newspapers paid to the ANWR issue. Clearly, the *Anchorage Daily News* has a graver stake in how the ANWR controversy is resolved than the *Atlanta Journal-Constitution* that published only 12% of the sample's ANWR-related news stories. As previously noted, ideally, it would have been intriguing to use more geographically diverse newspapers; doing so might have provided (albeit indirectly) a stronger suggestion of which regions of the country were more interested in the ANWR issue, or, at the very least, which regional newspapers considered the issue more salient to their readership.

### ***Thematic and Episodic Frames***

The results of the study supported H1; episodic frames were used significantly more often than thematic frames in newspaper stories of ANWR. More specifically, episodic frames appeared as the major emphasis in more than three-quarters of the news stories whereas thematic frames appeared as the major emphasis in a mere 7.5% of the news stories. Additionally, episodic frames appeared as the major emphasis in more than 70% of the news stories in the *Anchorage Daily News*, *New York Times* and *Washington*

*Post*, and in more than 60% of the news stories in the *Atlanta Journal-Constitution*. In short, episodic frames dominated newspaper coverage of ANWR, especially in the two largest, most influential newspapers (*Washington Post* and *New York Times*) and the Alaskan newspaper (*Anchorage Daily News*).

Overall, this finding supports the contention that episodic frames are more prevalent than thematic frames in news coverage of environmental issues (Iyengar, 1991; Nitz & West, 2004), and naturally begs the question: “what effect/s did the dominantly episodic newspaper coverage of ANWR have on its audience members?” Although answering this question empirically lies beyond the scope of this thesis, extant literature on the effectual nature of exposure to episodic and thematic content allows us to formulate some substantiated predictions about how this coverage might influence its users. As such, these findings suggest that individuals who obtain the majority of their information about ANWR from the episodically-prone newspaper articles in this sample most likely have an incoherent, decontextualized understanding of the ANWR issue, do not understand the significance of the ANWR issue, and do not know what they can do or who they can hold responsible for amending the ANWR issue (Iyengar, 1991).

These conjectures raise substantial concerns. If we accept that ANWR is a critically important environmental and political issue for America—a widely accepted notion—we would assume that the citizenry should be equipped with the knowledge and insight they need to (a) effectively understand the issue, its history, significance, and implications and (b) learn how to become involved in meaningful civic discourse on the issue. Yet, according to the results of this study, it would seem that newspapers, through

their gratuitous use of episodic frames, are not supplying the quality content (i.e., thematic frames) needed to help enable their readers to realize these two goals. Given that people need the media to help make sense of environmental issues (Ader, 1995), this potential disconnect demands further investigation. Future research should examine the casual dynamic between the lackluster (i.e., episodically dominant) media frames identified in this study (or similar studies) with the resulting audience frames.

One seemingly poignant explanation for the dominance of episodic content in ANWR news stories resides within the working environment of the modern-day newspaper: environmental issues are intrinsically complex, abstract and long-term issues that conflict with the increasing pressure for newspapers to become more entertaining (Nitz & West, 2004). Add to this paradox the fact that the news hole for environmental stories is shrinking (Friedman, 2004) and it becomes clearer why episodic content may have dominated the ANWR news stories. Simply put, in order for environmental issues to be covered prominently in newspapers, the stories written about them need to keep a careful eye on their entertainment value; using episodic frames—and their orientation toward affective, sensational sound bytes—help boost the entertainment value for otherwise serious, unobtrusive environmental fare. In the case of ANWR, its prolonged, contentious aura may have made it more readily primed for episodic coverage.

### ***Consequence Frames***

The goal of RQ2 and RQ3 was to assess which consequence frames were most commonly used in the overall sample and within each newspaper. Consequence frames were assessed since they represent the potential results of handling the ANWR issue in a

certain manner. As such, analyzing the divergence and frequency of a number of consequence frames commonly associated with the ANWR controversy legitimizes inferences as to which outcomes print media most commonly associated with the issue, and consequently which outcomes audience members might most likely use to formulate and justify their rationale for holding a certain perspective on the issue. Overall, three specific consequence frames were used most frequently in the ANWR coverage, and from this—following the line of logic discussed above—a number of assumptions can be made about which outcomes (a) each newspaper expressed as being most probable and (b) which outcomes audience members were most likely to assimilate.

The prediction that a few primary consequences would be cited most frequently in newspaper stories was supported. As previously reported, 10 of the 13 consequence frames assessed in the study appeared in less than three-quarters of the stories and seven of these consequence frames appeared in less than one-tenth of the stories. The three consequence frames that were cited most often included: the extent to which ANWR contains significant reserves (37%); whether drilling in ANWR will reduce America's dependence on foreign oil (46%); and whether drilling in ANWR will harm the natural environment (55%). Suffice to say that the newspapers examined in this study reduced the ANWR issue down to three possible outcomes. More specifically, the results showed that newspapers most commonly associated drilling in ANWR as (1) creating a reduced dependency on foreign oil, (2) fostering environmental degradation and (3) a dilemma in so far as it is not clear whether the area holds enough oil and natural gas reserves to warrant drilling. Certainly, these are three significant consequences propelling the

ANWR debate. However, in choosing to focus on these three outcomes a number of seemingly important consequence frames—although mentioned sporadically—were essentially left out of the ANWR debate. For example, the consequence frame concerning the extent to which drilling in ANWR will hamper or inspire the development of alternative fuels and fossil fuel conservation is representative of a seminal debate in environmental and economic policy: growth versus development (Daly, 1991). Yet this frame was cited in less than 5% of the total news stories. Other consequence frames that were practically invisible in the print coverage included the extent to which drilling in ANWR would (1) bolster national security (2) reduce domestic energy costs (3) disrupt Native peoples (4) increase oils spills or (5) create jobs, etc.

As expected, the same three consequence frames populated each specific newspaper's stories most frequently. Upon closer inspection, the manner in which certain newspaper's cited these consequence frames may illustrate the outcome/s they hold as most salient to the ANWR debate. The *New York Times* and *Anchorage Daily News* used the consequence frame regarding the extent to which ANWR holds significant oil and natural gas reserves quite differently. Whereas the *Anchorage Daily News* cited the affirmative perspective (i.e., ANWR holds significant reserves) most frequently (24%) the *New York Times* cited the opposite perspective (i.e., ANWR does not hold significant reserves) second most frequently (22%). Moreover, the *Anchorage Daily News* and the *New York Times* used the perspectives of this frame most inequitably; the *Anchorage Daily News* cited the affirmative perspective 13% more often than the opposite perspective, and the *New York Times* cited the opposite perspective more than 13% more

often than the affirmative perspective. Although the *New York Times* cited both perspectives of this consequence frame more frequently than any other newspaper, the *New York Times* favored the anti-drilling perspective of this consequence frame and the *Anchorage Daily News* favored the pro-drilling perspective of this consequence frame.

The *New York Times* and the *Anchorage Daily News* also used the consequence frame regarding the extent to which drilling in ANWR would harm the natural environment quite differently. The *Anchorage Daily News* cited this frame the least, and when it did cite the frame it cited the opposite perspective (i.e., drilling in ANWR will not harm the natural environment) most frequently (15%). Conversely, the *New York Times* cited the affirmative perspective of this frame (i.e., drilling in ANWR will harm the natural environment) most frequently (35%) and most inequitably, having cited the opposite perspective in a mere 6% of its stories. Again, the *New York Times* favored the anti-drilling perspective of this consequence frame and the *Anchorage Daily News* favored the pro-drilling perspective of this frame.

Last, the results showed that the *Atlanta Journal-Constitution* cited the notion that drilling in ANWR would reduce American dependency on foreign oil most frequently. Further, the *Atlanta Journal-Constitution* had the greatest divergence in the way they cited this consequence frame; they cited the affirmative perspective in 48% of their stories and cited the opposite perspective (i.e., drilling in ANWR will not reduce American dependence on foreign oil) in a mere 4% of their stories. The *New York Times* cited the opposite perspective of this frame more than any other paper, although it cited the affirmative perspective of this frame almost exactly as much.

The point of assessing these consequence frames was not to inspire a discussion about bias or ideological favoritism. Rather, the objective was to isolate which types of outcomes were most commonly associated with ANWR in the overall sample and the individual newspapers. If we accept that media frames “alter the kinds of considerations people use in forming their opinions” (Price & Tewksbury, 1997, p. 175) and, moreover that consequence frames link audience members with public opinion processes (Sotirovic, 2000), we can envision how audiences of the print media examined in this study might be inclined to adopt their overly parsimonious views of how resolving the ANWR issue in a certain way would have a specific consequence. Is the ANWR controversy merely an issue pitting environmental concerns against energy independency interests that teeters on whether there’s enough oil to legitimize drilling? The consequence frames most commonly portrayed in this study’s sample would imply an affirmative answer. But does this portrayal of the ANWR issue encapsulate its inherent complexity? Most certainly not. Although we cannot postulate to what extent the narrow use of these particular consequence frames had on its audience, we can rightfully postulate that the audience most likely did not develop a comprehensive understanding of how certain legislative decisions about ANWR would affect the future.

### *Sources*

Previous research lead to the hypothesis that (1) government sources would be cited most frequently in the sample and (2) that institutional sources would be cited second most frequently in the sample. As discussed, government sources were cited most often appearing in more than three-quarters of all newspaper stories. However,

environmental sources were cited second most frequently appearing in more than one-third of all newspaper stories and institutional sources were cited third most frequently appearing in more than one-fifth of all newspaper stories. As such, H2a was supported and H2b was not supported. The remainder of the sources—public, academic, union and other—were all cited in one-tenth of the news stories or less. Moreover, government sources were cited two or more times in at least half of the news stories; environmental sources were cited two or more times in stories second most commonly, but only in 9% of all news stories. Moreover, Chi-square tests found that government sources were cited significantly more often than expected and, conversely, every other source was cited significantly less often than expected.

The most interesting story to arise from the analysis of source use in each newspaper involved the extent to which environmental and government sources were used in the *Anchorage Daily News* and the *New York Times*. Of all the newspapers, the *New York Times* used government sources least (65%) and the *Anchorage Daily News* used environmental sources least (30%). Furthermore, the largest disparity between citing government and environmental sources in all the newspapers was found in the *Anchorage Daily News* which cited governmental sources 50% more often than environmental sources. Conversely, the smallest disparity appeared in the *New York Times* which cited government sources 29% more often than environmental sources. Compared to the other newspapers, it would appear that the *Anchorage Daily News* was predisposed to government sources and the *New York Times* more readily let environmental sources join the ANWR debate.

Overall, although environmental sources were cited second most frequently, government sources dominated the news stories examined in the sample; especially considering that more than half of the stories cited at least two government sources. This finding supports the notion that there is a strong dependence on government sources in environmental news stories (Lacy & Coulson, 1998, as cited in Friedman, 2004). Moreover, given the intense political underpinnings of the ANWR issue, this finding supports Trumbo's (1996) contention that scientists are used less as sources in environmental stories when the issue at hand becomes more politicized. Environmental journalists may be "using a larger number and wider range of sources today than in the early nineties" (Friedman, 2004, p. 182), but this trend was not supported by this study. Given the disparity in how sources were used, it appears as though the perspectives of government sources have been significantly privileged at the expense of alternate perspectives that would have been expressed by other sources (Tedesco, 1991).

There is a plethora of explanations for why government sources might have been used so frequently in newspaper stories about ANWR. For example, as previously mentioned, journalists tend to use the most readily available sources to provide them with information about environmental issues (Davis, 1995). Clearly, government sources, because they are high-profile public servants, should be more readily available than the other sources assessed in this study. Combined with the tendency for journalists to be skeptical of environmental sources' motives and to consider environmental sources difficult to work with (Dennis, 1991) it becomes more apparent why the comments of government officials were used so often.

The results outlined above raise more questions than they answer. The findings on source frames support the supposition that the audience members of these news stories were more likely to contemplate the ANWR issue in terms and perspectives consummate with government-based frames. As such, future research should use framing theory to examine the extent to which the frames used by privileged sources (i.e., government sources) in print media about a specific environmental issue are adopted by their users.

In addition to the sources cited in news stories, the background of the journalists writing the stories should also be assessed. Dennis, (1991) wrote,

When it comes to systematically covering “the environmental story,” anyone who moves beyond the most simplistic approach sees immediately the extraordinary complexity involved in mapping the territory ... An essential problem is a lack of expert training and expertise among media (p. 61).

Skewed media coverage of environmental issues has been attributed to their inherent complexity and a lack of instruction and enterprise on behalf of the journalists covering them (Liebler & Bendix, 1996; Lucas, 1994). Although there is sufficient evidence to suggest that environmental news coverage has improved and that journalists are continually developing an understanding of environmental issues (Friedman, 2004), there is still ample room for improvement. In other words, it’s not a stretch to assume that increasing the extent to which trained environmental reporters cover environmental issues would bolster the quality of these stories. To further examine this assumption, future research should examine and compare the frames used in environmental news stories

written by trained environmental reporters with those used by general reporters (i.e., reporters not specifically trained to cover environmental issues) (Nelson, 2004).

### ***Drilling Perspective***

As previously discussed, items relating to tone were not reliable and were not assessed. However, issue stance was regarded as a characteristic of tone that portrayed the extent to which newspaper stories presented a favorable or critical view of the potential development in ANWR. As such, the study assessed which drilling perspective—pro or anti—was presented most frequently in the overall sample and within each newspaper. The findings showed that pro- and anti-drilling frames were cited similarly for the overall sample; there was no significant difference between their use. Although a very general measure, this result showed that, overall, newspaper stories presented a balanced use of frames that were critical of and favorable toward drilling in ANWR.

This same result was found in the newspaper stories of the *Washington Post* and *Atlanta Journal-Constitution*. However, the *Anchorage Daily News* used significantly more pro-drilling frames than anti-drilling frames and the *New York Times* used significantly more anti-drilling frames than pro-drilling frames. As such, there is evidence that the ANWR-related news stories in the *Anchorage Daily News* favored drilling and those in the *New York Times* opposed it. If we accept framing theory's assumption that, in general, media frames are adopted by the audience members who are exposed to them (McQuail, 2000) we could anticipate that readership of the *Anchorage*

*Daily News* might be more likely to hold favorable views of drilling and the readership of the *New York Times* might be more likely to hold critical views of drilling.

This finding, as with those previously discussed, suggests that causality eventually be examined. Through experimentation, communication researchers could test the extent to which the drilling perspectives of heavy readers align with the privileged drilling perspectives of these specific papers. Although a number of considerations would have to be addressed in this study's design (i.e., controlling for the readership's political leanings, knowledge of the ANWR issue, etc.), it would add valuable insight regarding the relationship between newspapers and their readership's views on environmental issues.

### ***Consequence Frames in Articles and Editorials***

As an exploratory measure, this study assessed the extent to which the consequence frames identified in news stories compared with the consequence frames identified in editorials. Findings indicated that there was a significant difference in how 4 of the 13 consequence frames—the extent to which drilling in ANWR would create jobs, reduce domestic energy costs, reduce dependency on foreign oil, and whether ANWR contained significant oil reserves—were used in articles and editorials. In short, for these four consequence frames, newspaper articles privileged the pro-drilling consequence frames and editorials privileged the anti-drilling consequence frames.

This finding raises some thought-provoking possibilities. Huckin (2002) posited that editorialists (as compared to news reporters) have broader understandings of issues

and where the public stands on those issues. Combine this notion with the inherent responsibility of editorialists to inject their opinions into their stories and it seems clear that editorials may include more calculated frames. As such, the frames in editorials may more closely represent where a newspaper stands on an issue and where a newspaper believes its audience stands on an issue (after all, newspapers stand to profit by appealing to their readership's sensibilities). If we accept this rationale, the findings suggest that, in general, the newspapers used in this sample are more likely to believe that (a) negative consequences are more likely to result from drilling in ANWR and (b) that their readers believe negative consequences are more likely to result from drilling in ANWR. Even if this contention seems implausible, at the very least, the findings show that, overall, the editorials espoused more anti-drilling consequences than the news articles.

Regardless of what specific conclusions are drawn from this particular finding, it serves to illustrate the value in comparing the framing patterns used in editorials and news articles. As previously discussed, it was not feasible to expedite this comparison for each of the framing criteria examined in this study. However, future research should examine the differences in how environmentally-based newspaper articles and editorials use specific framing patterns. Is there a significant difference in how they use thematic and episodic content? Is there a significant difference in how they use tone and issue stances? Are there consistent disparities in how frames are used for editorials and news articles? The answers to these questions would not only help increase the environmental communication subfield's understanding of environmentally-based print media content,

they would help guide further investigation of the effectual relationship between content in different print media genres and their users' dispositions toward environmental issues.

### ***Additional Implications for Future Research***

There are other important considerations for future research. As noted earlier, for logistical reasons this study only examined media frames. As such this study assessed media content but did not assess audience frames which would have provided a holistic, empirical look at the causal relationship between the frames that populated the sample's newspaper content and the frames that populated the minds of individuals who used the sample's newspaper content. In the future, environmental communication researchers should aim to assess the entire framing process (Nitz & West, 2004).

As previously mentioned, the ANWR drilling issue resurfaced when the Senate endorsed oil drilling in ANWR (*New York Times*, 2005) on March 16, 2005. As a result, this study most likely does not address print media reflective of the ANWR controversy's most recent spell of high-profile coverage; coverage that may be more prolific than before given the strong indications that government legislators are poised to open ANWR to oil development. Replicating this study with newspaper stories written since the ANWR issue resurfaced in March 2005 would provide an interesting comparison between how the print media covered the same issue when it was being rejected and when it was being approved. A number of inferences could be made from this assessment including the extent to which inverse legislative decisions on the same issue influenced the frames employed by the newspapers. Were consequence frames used similarly? Did

the divergence in editorial and news article frames differ between the samples?

Answering these questions would provide a heuristically provocative look at a) the newspapers' unspoken beliefs about the ANWR issue and b) how the newspapers assumed their readership felt the ANWR controversy should be solved.

With the media's exponential proliferation people have ever-increasing access to information. As such, individuals can learn about environmental issues through numerous mediums, not just newspapers. Although this study provided an informative assessment of recent ANWR-based newspaper content, it did not evaluate recent ANWR-based content in other media conduits. For a more comprehensive understanding of how the media has framed the ANWR controversy, future research should systematically examine how other mediums (i.e., television, Internet, etc.) framed coverage of this issue (and other salient environmental issues). Moreover, future studies, when appropriate, should assess other framing criteria, including the use of ANWR-related imagery.

### ***Framing Theory***

Framing theory was used to drive this study for a number of reasons. First, framing theory is emerging as a primary theory of media effects research (Price & Tewksbury, 1997) and has been "the most frequently utilized mass communication theory in the 21<sup>st</sup> Century" (Bryant & Miron, 2004, p. 695), an indicator that communication scholars have recognized framing theory's utility. Second, despite its somewhat nebulous conceptualization (Entman, 1993), framing theory provides a means through which to effectively describe mediated news content and how audiences learn from that content

(Entman, 1993; McQuail, 2000). Third, and perhaps most applicably, framing theory has allowed communication researchers to better understand the media's presentation of environmental issues and, in some cases, how these presentations influence their respective audiences (Davis, 1995; Liebler & Bendix, 1996; Lucas, 1994; Nitz & West, 2004; Pompper, 2004). As such, framing theory was a natural foundation on which to approach this study's primary objective: to identify how a select group of newspapers presented coverage of recent attempts to open ANWR to oil development.

The findings illustrate that framing theory was indeed an appropriate, useful tool through which to approach the objectives set forth in this study's hypotheses and research questions. More specifically, framing theory allowed for the identification and systematic isolation of specific patterns in recent newspaper coverage of the ANWR controversy. The findings—made possible by the use of framing theory—revealed that episodic content, a select few consequence frames and government sources dominated ANWR newspaper coverage. Additionally, the findings indicated that, overall, no specific issue stance—pro- or anti-drilling—was used significantly more than the other. As previously explained, these findings have important ramifications because they provide an empirically-based understanding of how American newspapers presented their coverage of a current, prolific and volatile environmental issue. Furthermore, although, this study did not directly assess the interplay between these media frames and their respective audience frames, its findings, based on extant research, contribute to communication scholars' ability to estimate and hypothesize how these media frames may have influenced their audiences. In sum, framing theory, provided the conduit through which

to identify mediated content about a critically important environmental issue, and, subsequently, through which to more knowledgably extrapolate how this type of media content might affect its users.

Given the extent to which the public needs the media to help them understand environmental issues (Ader, 1995), it is imperative that communication scholars continue to assess the dynamic between the media and the public's disposition toward environmental issues. This study provides further evidence that framing theory is a useful means through which to investigate this relationship.

### **Limitations**

There are a number of limitations to address in addition to those already discussed in the previous sections of this chapter. The two most basic limitations are evident in the sample. First, although the sample size ( $N=214$ ) was sufficient, the findings would have been bolstered with a larger, more geographically representative sample. Specifically, this study would have benefited from using more large circulation and/or elite newspapers (i.e., *Wall Street Journal*, *Chicago Tribune*, *Los Angeles Times*, *Dallas Morning News*, etc.). Not only would this more expansive sample have increased the extent to which the study's findings could have been generalized, but it would have provided a more detailed comparison of how newspapers from different geographic regions of the United States framed coverage of the ANWR issue. Additionally, the small sample size of *USA Today* ( $N=11$ ) restricted the extent to which the framing patterns

isolated in its content could be compared to other newspapers. (For this reason, *USA Today* content as an individual paper apart from the overall sample was not included in the discussion section). Second, LEXIS-NEXIS™ may have been an overly reductionist means through which to obtain the sample; there is no way to be sure that every ANWR-related article in the five newspapers comprising the sample was identified in the search process. As such, it is possible that a number (albeit small) of ANWR-related news stories were not included in the sample (Nitz & West, 2004).

As previously noted, the two-thirds rule (Nitz & West, 2004) employed to measure the item of “tone” resulted in unacceptably low Krippendorff alpha reliability scores. Consequently, tone was not included in analysis and therefore RQ7 (regardless of drilling perspective, what overall tone—positive or negative—did newspaper stories about ANWR present more frequently?) was not addressed. This was a distinct limitation to this study. Given the power of tone in news coverage to influence public opinion (Iyengar, 1991) and, more specifically, the power of negative tone to boost cynicism, magnify emotionally-based judgments and stifle substantive discussion (Moy & Pfau, 2000, as cited in Nitz & West, 2004), measuring this particular framing criteria was an important aspect of this study, especially since the topic is inherently contentious and therefore potentially predisposed to display a negative tone. The results of this study would have benefited from a valid, systematic assessment of how tone was used in the articles.

## **Conclusion**

The primary goal of this study was to identify how a number of specific framing characteristics were used in a sample of recent newspaper stories about the ANWR controversy. Given the especially powerful role the media play in influencing the public's disposition toward environmental issues and the high-profile, combative aura of the ANWR issue, the author thought this endeavor was important, and more specifically, that this endeavor would contribute to the growing body of environmental communication research literature.

Overall, the findings substantiate claims in previous communication research that media coverage of environmental issues is problematic. Although the study revealed a few promising characteristics—the topic garnered significant attention in newspapers and was presented, overall, without being overtly skewed to a specific pro- or anti-drilling perspective—the framing patterns were indicative of overly parsimonious coverage: episodic content dominated; government sources were privileged; and only a minute handful of potential ANWR consequences were discussed. As such, as posited by extant research, it is probable that the media content identified in this study was likely to induce among its audience members an incoherent, decontextualized understanding of ANWR and, perhaps more importantly, a tenuous representation of how this issue can most effectively be resolved. Furthermore, it is important to note that the media content identified in this study is not potentially problematic solely because it favored episodic coverage, government sources and few consequence frames. Rather, it is potentially detrimental because by privileging these framing patterns the print media dialogue on the

intrinsically complex ANWR issue was restricted, and as such, critical voices, perspectives and considerations were left in the shadows.

## **APPENDIX: CODING INSTRUCTIONS**

## **Coding Instructions for Newspaper Coverage of the Bush Administration's Proposal to Drill for Oil and Natural Gas in the Arctic National Wildlife Refuge**

### **Unit of Analysis:**

Newspaper story

### **General Procedure:**

Please read the instructions carefully prior to coding the newspaper stories. First, familiarize yourself with the coding scheme. Once you understand the coding scheme, read each story in its entirety at least once before you begin coding; the first reading should be relatively uninterrupted.

On subsequent readings, it will help to take notes on scratch paper and compile five lists:

- 1) keep a running list of quoted sources
- 2) keep a running list of possible episodic or thematic frames
- 3) keep a running list of the new story's drilling perspective: pro, anti, or mixed
- 4) keep a running list of the overall tone: positive, negative, or neutral
- 5) keep a running list of the consequence frames

After you have read the entire newspaper story and completed the lists, proceed to code beginning with Section A. When you have finished coding, check all forms for completeness, legibility, labels and write-in comments. Do not code the same wire story more than once; it is possible that the same wire service story might appear in different papers.

**Make sure to include a leading 0 or 0s for codes that contain a two-, three-, or four-digit coding space.** For example, newspaper story 47 should be coded as 047.

**Make sure you have a coding sheet for each newspaper story.**

### **Section A: Background Information**

This section includes background information about each newspaper article.

<u>Item</u>	<u>Specification</u>
-------------	----------------------

- |           |   |
|-----------|---|
| <b>1.</b> | <b>Story number (3-digit code)</b><br>This will be found in the top right corner on the first page of each newspaper story. |
| <b>2.</b> | <b>Newspaper (2-digit code)</b><br>01 = Anchorage Daily News<br>02 = New York Times<br>03 = Washington Post                 |

04 = Atlanta Journal-Constitution  
05 = USA Today

**3. Month (2-digit code)**

01 = January  
02 = February  
03 = March  
04 = April  
05 = May  
06 = June  
07 = July  
08 = August  
09 = September  
10 = October  
11 = November  
12 = December

**4. Day (2-digit code)**

**5. Year (4-digit code)**

**6. Type of news story**

0 = cannot code  
1 = news article  
2 = editorial  
3 = other

**7. Story title (list complete title, including any subheadings or phrases)**

**8. Page number (2-digit code) (code as “99” if no page number is given)**

**9. Name of first author of newspaper story**

Enter the first, middle, and last names for the first listed author. If no author is provided, write “no author name.” If some other attribution is given, write “other.”

**10. Name of second author of newspaper story (if applicable)**

Enter the first, middle, and last names for the second listed author. If no second author is provided, leave blank. If there are three or more authors do not include their names.

**11. Number of words in newspaper story (4-digit code)**

If not specified, code as 9999.

**12. First author/by-line affiliation**

- 0 = no first author/by-line
- 1 = no affiliation
- 2 = staff writer
- 3 = wire service
- 4 = other affiliation

**13. Second author/by-line affiliation**

- 0 = no second author/by-line
- 1 = no affiliation
- 2 = staff writer
- 3 = wire service
- 4 = other affiliation

**14. News wire service**

- 0 = None
- 1 = Associated Press (AP)
- 2 = Reuters
- 3 = Knight-Ridder
- 4 = United press International (UPI)
- 5 = Gannett
- 6 = Dow Jones
- 7 = Bloomberg
- 8 = Other (specify): \_\_\_\_\_

**15. Name of coder**

- 0 = Anthony Dudo
- 1 = Jake Turner

**Section B: Sources**

Code the sources used in each newspaper story. Carefully review each of the codes below before starting. Source may be directly quoted (e.g., “Pursuing oil and natural gas exploration in ANWR is unnecessary,” noted Congressman Jones) or have information attributed to them (e.g., Congressman Jones believes pursuing oil and natural gas exploration in ANWR is unnecessary). Each source should be coded once for each story. Code only sources whose comments discuss ANWR.

Information about the institution or affiliation may not be available for all governmental, institutional, environmental/scientific, or academic sources. Conversely, only institutional information may be provided (e.g., “the Department of Energy reports ...”).

Item    Specification

**16-22 Sources and number of times cited**

- 0 = not cited

- 1 = cited once
  - 2 = cited twice
  - 3 = cited three or more times
  - 9 = cannot code
16. Government source (e.g., senators, congressmen/women, EPA officials, Secretary of the Interior, etc.)
  17. Institutional sources (business and industry sources, e.g., CEO's, corporate spokespersons, etc.)
  18. Environmental/scientific sources (non-government environmental and/or scientific organizations, e.g., Sierra Club spokespersons)
  19. Citizens from the general public
  20. Academics (e.g., university professors)
  21. Union sources (e.g., steel union official)
  22. Other sources (sources that do not fit the previous categories, e.g., critics, reports that were not funded or associated with the other categories)

### **Section C: Thematic and Episodic Frames**

Prior to coding each story, carefully review the frame descriptions and examples located on p. 115.

If a frame occurs more than once, keep track of the total number of times that the frame occurs. Not all text will contain a frame.

After coding all the frames, use your judgment to determine whether the frame had a minor, mixed, or major emphasis in the story. If one frame occurred more frequently than the other frame it should be coded as "major emphasis" and the other frame should be coded "minor emphasis." Conversely, if each frame occurred a similar number of times, the frame should be coded as "mixed emphasis."

#### Item   Specification

#### **23. Frame100 placement (Thematic Frame)**

- 0 = does not appear
- 1 = mentioned before Frame200
- 2 = mentioned after Frame 200
- 9 = cannot code

- 24. Frame100 emphasis**  
 0 = does not appear  
 1 = minor emphasis  
 2 = mixed emphasis  
 3 = major emphasis  
 9 = cannot code
- 25. Frame200 placement (Episodic Frame)**  
 0 = does not appear  
 1 = mentioned before Frame100  
 2 = mentioned after Frame100  
 9 = cannot code
- 26. Frame200 emphasis**  
 0 = does not appear  
 1 = minor emphasis  
 2 = mixed emphasis  
 3 = major emphasis  
 9 = cannot code

**Section D: Drilling Perspective**

Follow the same directions as provided in Section B and carefully review the frame descriptions and examples located on p. 116.

Item    Specification

- 27. Frame300 placement (Pro-drilling Frame)**  
 0 = does not appear  
 1 = mentioned before Frame400  
 2 = mentioned after Frame400  
 9 = cannot code
- 28. Frame300 total count**  
 0 = does not appear  
 1-9 = total number of time frame appears in story; if 10 or more times code as “9”
- 29. Frame300 emphasis**  
 0 = does not appear  
 1 = minor emphasis  
 2 = mixed emphasis  
 3 = major emphasis  
 9 = cannot code

- 30. Frame400 placement (Anti-drilling Frame)**  
 0 = does not appear  
 1 = mentioned before Frame300  
 2 = mentioned after Frame300  
 9 = cannot code
- 31. Frame400 total count**  
 0 = does not appear  
 1-9 = total number of time frame appears in story; if 10 or more times code as “9”
- 32. Frame400 emphasis**  
 0 = does not appear  
 1 = minor emphasis  
 2 = mixed emphasis  
 3 = major emphasis  
 9 = cannot code

**Section E: Tone**

Follow the same directions as provided in Section B and carefully review the frame descriptions and examples located on p. 117.

- | <u>Item</u> | <u>Specification</u>   |
|-------------|--|
| <b>33.</b>  | <b>Frame500 placement (Positive tone)</b><br>0 = does not appear<br>1 = mentioned before Frame600<br>2 = mentioned after Frame600<br>9 = cannot code |
| <b>34.</b>  | <b>Frame500 emphasis</b><br>0 = does not appear<br>1 = minor emphasis<br>2 = mixed emphasis<br>3 = major emphasis<br>9 = cannot code                 |
| <b>35.</b>  | <b>Frame600 placement (Negative tone)</b><br>0 = does not appear<br>1 = mentioned before Frame500<br>2 = mentioned after Frame500<br>9 = cannot code |
| <b>36.</b>  | <b>Frame600 emphasis</b>   |

- 0 = does not appear
- 1 = minor emphasis
- 2 = mixed emphasis
- 3 = major emphasis
- 9 = cannot code

## **Section F: Consequence Frames**

Code the consequence frames used in each newspaper story. Prior to coding each story, carefully review the consequence frames as they appears below. Most likely, not all frames will appear in a story. Not all text will contain a consequence frame.

If a consequence frame occurs more than once, keep track of the total number of times that the frame occurs.

### Item    Specification

#### **#'s    Consequences and number of times cited**

- 0 = not cited
- 1 = cited once
- 2 = cited twice
- 3 = cited three or more times
- 9 = cannot code

37. Jobs will be created

38. Jobs will not be created

39. Reduced domestic energy costs

40. Domestic energy costs will not be reduced

41. Construction and operation of oil and gas production facilities in ANWR will be expensive

42. Construction and operation of oil and gas production facilities in ANWR will not be expensive

43. Reduced dependency on foreign oil

44. Dependency on foreign oil will not be reduced

45. Environmental aspects (including flora, fauna, etc.) will be harmed

46. Environmental aspects (including flora, fauna, etc.) will not be harmed

47. Technology will reduce the potential/extent of environmental degradation
48. Technology will reduce the potential/extent of environmental degradation
49. ANWR should be designated a wilderness
50. ANWR should not be designated a wilderness
51. More potential for oil spills
52. Same or less potential for oil spills
53. Displacement of native peoples
54. Significant oil and natural gas reserves
55. Insignificant oil and natural gas reserves (ANWR will not yield a significant amount of oil and natural gas reserves)
56. Significant profits for the United States and/or Alaska
57. Insignificant profits for the United States and/or Alaska
58. Will bolster national security
59. Will not bolster national security
60. Hampers the development of alternative fuels and conservation of fossil fuels
61. Does not hamper the development of alternative fuels and conservation of fossil fuels

<b>FRAME DESCRIPTIONS AND EXAMPLES</b>		
<b>Frame</b>	<b>Description</b>	<b>Example Phrases</b>
<b>100 Thematic</b>	Comments or text that place the issue of ANWR in a general context by providing historical/background information about ANWR, and/or discussing the effects and/or causal relationships surrounding ANWR. These comments or statements should speak to the ANWR issue as a whole.	<p>“The fight to drill in ANWR has raged for years becoming one of the most contentious issues ...”</p> <p>“Drilling for oil in ANWR has been a key wish of the Bush administration’s energy policy.”</p> <p>“Proponents of drilling in ANWR maintain a significant amount of oil will be found at minimal risk to the surrounding environment.”</p>
<b>200 Episodic</b>	Comments or text that focus on isolated, specific events or particular cases related to ANWR; these comments or statements do not provide a context or background of ANWR and are frequently based in sensational or affective presentations.	<p>“Senator Gus Jones gave a speech proclaiming his desire to open ANWR to drilling, saying that ...”</p> <p>“Alaskan legislators and three oil companies yesterday asked Congress to underwrite the costs of constructing a pipeline connecting ANWR to the U.S. heartland.”</p> <p>“The National Academy of Science released an environmental impact report detailing the projected effects of drilling on in ANWR.”</p>

<b>FRAME DESCRIPTIONS AND EXAMPLES</b>		
<b>Frame</b>	<b>Description</b>	<b>Example Phrases</b>
<b>300 Pro-drilling</b>	<p>Comments or statements that advocate oil and/or natural gas development in ANWR and/or indicate improvements or benefits that will occur as a result of this action, most likely by mentioning favorable consequences.</p> <p>*** In editorials, do not code these frames verbatim, use the context of the editorial to measure which of these two frames the author/s support.</p>	<p>“Congressmen Gus Jones noted that utilizing fossil fuels found in ANWR could seriously reduce our reliance on foreign oil.”</p> <p>“Oil officials point out the job growth and inherent economic windfall that will occur as a result of opening ANWR to oil and gas development.”</p>
<b>400 Anti-drilling</b>	<p>Comments or statements that condemn oil and natural gas development in ANWR and/or indicate problems or shortfalls that will occur as a result of this action, most likely by mentioning detrimental consequences.</p> <p>*** In editorials, do not code these frames verbatim, use the context of the editorial to measure which of these two frames the author/s support.</p>	<p>“Many local citizens believe that oil and gas production in ANWR will cause adverse effects to the area’s indigenous wildlife.”</p> <p>“John Smith, a spokesperson for the World Wildlife Fund, noted the increased likelihood of oil spills that will result from a policy shift in ANWR.”</p> <p>“My entire community would have to relocate hundreds of miles from here if ANWR is opened to oil production.”</p>

<b>FRAME DESCRIPTIONS AND EXAMPLES</b>		
<b>Frame</b>	<b>Description</b>	<b>Example Phrases</b>
<b>500 Positive Tone</b>	<p>Comments or text that depict the ANWR issue in a positive manner. This text will discuss the potential of the ANWR issue to be resolved in a positively or beneficially. The conflicts surrounding the issue will be presented as opportunities that can offer positive outcomes. Verbiage does not include inflammatory adjectives; adjectives that connote combative opinions or harangues (disparaging remarks about the other perspective).</p>	<p>“ANWR’s potential production won’t be enough to influence the world oil price, so drilling is not the answer to those seeking relief from high gasoline prices. Instead, conservation and the development of alternative fuels will be more effective measures.”</p>
<b>600 Negative Tone</b>	<p>Comments or text that depict the ANWR issue in a negative manner. This text will discuss the ANWR issue in an adversarial or combative tone. The conflicts surrounding the issue will be presented with little discussion of how they might be solved beneficially and inflammatory adjectives will be used.</p>	<p>“Oklahoma Governor Frank Keating said that the Senate will now take up the president’s energy bill, and we can expect more hysterical rhetoric about natural cathedrals (ANWR) subject to devastation by rapacious oil conglomerates.”</p> <p>“In his typical myopic fashion, President Bush has irrationally proposed opening ANWR to oil and gas development.”</p>

## Recording Instrument

\_\_\_\_\_ Story Number (1)

Story Title (7) \_\_\_\_\_

First Author Name (9) \_\_\_\_\_ Second Author Name (10) \_\_\_\_\_

_____ Coder ID (15)	_____ Fr200pl (25)	_____ Hrmdenvt (45)
_____ Newspaper (2)	_____ Fr200em (26)	_____ Nhrmdenvt (46)
_____ Month (3)	_____ Fr300pl (27)	_____ Techhelp (47)
_____ Day (4)	_____ Fr300tot (28)	_____ Technohelp (48)
_____ Year (5)	_____ Fr300em (29)	_____ Anwrwild (49)
_____ Type (6)	_____ Fr400pl (30)	_____ Nanwrwild (50)
_____ Section (8)	_____ Fr400tot (31)	_____ Moroilspl (51)
_____ Pagenum (11)	_____ Fr400em (32)	_____ Lesoilspl (52)
_____ Numbwds (12)	_____ Fr500pl (33)	_____ Natpeple (53)
_____ Authbyline1 (13)	_____ Fr500em (34)	_____ Sigresrves (54)
_____ Authbyline2 (14)	_____ Fr600pl (35)	_____ Nsigresrves (55)
_____ Wiresrv (16)	_____ Fr600em (36)	_____ Sigprofits (56)
_____ Govtsrce (17)	_____ Jobs (37)	_____ Nsigprofits (57)
_____ Instsrce (18)	_____ Jobsno (38)	_____ Natsec (58)
_____ Envtsrce (19)	_____ Redenrgy (39)	_____ Nonatsec (59)
_____ Pubsrce (20)	_____ Noredenrgy (40)	_____ Naltfuels (60)
_____ Acadsrce (21)	_____ Expensive (41)	_____ Altfuels (61)
_____ Unionsrce (22)	_____ Nexensive (42)	
_____ Othersrce(23)	_____ Redforoil (43)	
_____ Fr100pl (24)	_____ Nredforoil (44)	

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