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To the Graduate Council:

I am submitting herewith a dissertation written by Jon M. Smith entitled "Visual and verbal claimsmaking about the endangered species issue on network television : a media framing analysis." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Communication.

Barbara A. Moore, Major Professor

We have read this dissertation and recommend its acceptance:

M. Mark Miller, Mark E. Littman, Robert E. Jones

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Accepted for the Council:

Associate Vice Chancellor and
Dean of the Graduate School

VISUAL AND VERBAL CLAIMSMAKING ABOUT THE ENDANGERED SPECIES ISSUE ON NETWORK TELEVISION: A MEDIA FRAMING ANALYSIS

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Jon M. Smith
December, 1997

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Lastly, the greatest debt is owned to my wife, Anne. Without her love and support I would never have reach this moment.

ABSTRACT

How do the television networks portray disparate views when covering environmental controversy? Other research indicates media framing suggests the story elements that are emphasized and repeated contribute to the overall story theme and impression received by viewers. Watching television has a negative effect on environmental knowledge and willingness to act in favor of the environment. This study probes these issues by investigating words and pictures used in network television stories on endangered species as they related to advocacy groups or claimsmakers who have a stake in this issue. These groups included government regulators, scientists, environmental activists, pro-development or industry representatives, and legislators. The primary area of interest was the apparent influence and interaction between environmental activists and pro-development representatives on news content. Previous studies have shown these claimsmakers to use distinct and relatively exclusive language when discussing controversial issues.

This study applies elements of framing theory in primarily quantitative examination of environmental news coverage. In an attempt to find concrete indicators of how the endangered species issues were framed by the news media, a systematic content analysis was conducted on a stratified-by-year random sample of 165 endangered species stories broadcast on network television evening news programs from 1968 to 1997 obtained from the Vanderbilt Television News Archives. Because the networks were the dominant source of news during these years, the programs provide a useful site for examining the way the endangered species issue was presented to US audiences by news media.

Verbatim transcripts and the use of the VBPro family of computer programs created by Mark Miller of the University of Tennessee, Knoxville, allowed isolation and examination of interview segments and broadcasters' words to determine dominance by particular claimsmaker groups. A shot-by-shot examination of the length and number of edited shots was used to determine which groups and which activities were shown more often than others.

Through t-test and Chi-square statistical analysis, the study found that government regulators contributed most of the interview segments, but that environmental terms or language was used significantly more frequently than pro-development terms. There were also many more pictures of pro-development activities than of environmentalists. The stories tended to blame pro-development and industry for the endangered species problem while showing wide shots of pro-development activity. Humans were generally not seen in shot sequences about pro-development activity. When environmentalist's activities were shown, the shots tended to be close-ups. The tendency to use more pro-development or business at work pictures while using environmental language in the same stories created a situation which lacked apparent content reinforcement or redundancy. The positioning of pro-development pictures with environmental language may tend to emphasize that business is to blame.

Frame resonance occurs when messages support and reinforce one another. In the case of network television news stories about endangered species, media framing presents

preservation and conservation language from environmentalists which may tend to negatively modify and perhaps invalidate legitimate business activity.

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CHAPTER 1

INTRODUCTION

Environmentalism was in its infancy and television was in its adolescence when Rachel Carson published "Silent Spring" in 1962. In the seminal book, Carson used the chilling reasoning that since there were fewer birds singing in the springtime due to pesticide poisoning, other living creatures including humans, were at risk from pesticide contamination and other environmental problems. Not only were the animals endangered, but humans were endangered as well. The way of viewing or framing the endangered species issue began to change because animals at risk could be seen as a warning to humans. The way the public saw the issue through the mass media was changing as well. More and more people were learning about the environment through television.

Since the 1960s, government environmental regulation has dramatically expanded and the environmental movement has become a powerful force in public policy development. The media have been considered an instrumental contributor to this growth in environmentalism and in public policy implementation (Sachsman, 1996; Shoenfeld, 1972).

During this same time period beginning in the 1960s, network television grew, matured, and then peaked in the 1970s. It is now beginning to wane as the nation's dominant mass medium (Shaw, 1991). The network news divisions experienced similar development patterns (Howard, Keivman & Moore, 1994). Many questions can arise concerning television's impact and influence on environmental issues due to the coincidence

or causal relationship of modern environmentalism and the growth of network television during the same time period.

One environmental issue displayed prominently in the mass media deals with the human relationship with wildlife. Messages about wild and endangered animals surround us, where a typical American's day could start by watching a network morning news show with a news segment about the endangered manatee in the Florida. Children might be exposed to wildlife information through classroom projects, trips to zoos, and endangered species information displayed on animal crackers and breakfast cereal boxes. Adults may encounter wildlife information in newspaper articles about conflicts between the timber industry and efforts to preserve old-growth forests and protect the spotted owl, or with the delay of construction on an astronomical observatory because it threatens a squirrel species' habitat. Other endangered species are highlighted in insurance, automobile, and oil company television commercials. All these messages are standard fare in today's society. The public is bombarded with environmental messages and many of them deal with the relationship between humans and wild animals.

One of the main ways people learn about wild animals is through television news, such as this network news story introduced by Dan Rather.

> Dan Rather, CBS News, April 24, 1989:
>
> An oil tanker ran aground today off the nation's northernmost ice free port, Valdez, Alaska. The first pictures are just in and the consequences are costly. Tonight the Interior Department said it fears that much wildlife will be killed. Jerry Bowen in Los Angeles has ***the pictures and the story*** (emphasis added).

Television news is considered a primary source of public information on environmental issues. As Dan Rather suggests in the lead to above story, the pictures may be different from the story or the words and the pictures may modify one another. The degree of agreement or redundancy between the pictures and words may determine the ultimate message received. Television's emphasis on pictures is understandable due to the technical structure of the medium. However, the relationship of the pictures and words to the resulting interpretation of a story is unclear. Both pictures and words contribute to the frame through which audiences perceive a message.

The concept of media framing is becoming more and more prevalent in the body of literature addressing the news media's techniques, their role, and their effects in our society. In the process of framing an issue, the news media "select some aspects of a perceived reality and make them more salient in a communication text, in such a way as to promote a particular problem definition" (Entman, 1993, p. 56).

This study examines network television news' use of verbal and visual messages and their contribution to story framing. Because television news is a dominant information source and television is visually oriented, the question can be asked, "When it comes to controversial public issues portrayed in messages on network news, how do the words and pictures contribute to the overall framing of an issue?"

Gitlin defined media frames as "persistent patterns of cognition, interpretation, and presentation, of selection, emphasis and exclusion, by which symbol-handlers routinely

organize discourse, whether verbal or visual" (1980, p. 7). Others have suggested media frames are "scene-setting" words and visuals that put a news event in a broader social and historical context (Neuman, Just & Crigler, 1992). Television networks, as symbol-handlers, have the power to "show" people what is going on in the world. At the same time framing can distort, conceal, and essentially manipulate information leading to misinformation and perceived inaccuracies (Iyengar & Kinder, 1987; Gitlin, 1980).

When dealing with issues of which the public has little first-hand knowledge, such as some environmental issues, the potential for the news media to set the agenda for the public is considerable (Ader, 1993; Wilson, 1993; Atwater, Salwen & Anderson, 1985). Environmental issues are often controversial and "media frames define the issue in contention and constrain opposing argument to the established terms of debate" (Schlechtweg, 1996, p. 258). The news media can establish the parameters within which a public issue is debated and simultaneously exclude elements which could be included in the debate. Media critics suspect the news media have presented a consistent framework for environmental coverage leading to charges of deliberate bias, inaccuracies, and creating confusion among audiences (Cantrill, 1993; Smith, 1992; Graham, 1989; McClure, 1989). While the media have been credited with providing a vehicle for helping the growth of the environmental movement (Neuzil & Kovarik, 1996; Dunlap & Mertig, 1992), one author claims that "the (media) feeding frenzies over Alar on apples, EDB [preservatives] in breakfast cereals, 'toxic terror' at Love Canal, and nuclear meltdown at Three Mile Island all turned out to be overblown media scares" (Lichter, 1996, p. 38).

This study examines one of those message channels--network television news--and its framing of a construction of a reality concerning endangered species. The study attempts to provide information which may provide insight into what visuals dominate coverage resulting in an overall frame, and whose frame or viewpoint is consistently presented (Entman, 1993; Gitlin, 1980). Consistent portrayal of certain topics may help people in our society develop the definitions and concepts upon which they construct their reality (e.g. Best, 1989; Spector & Kituse, 1977). The consistency of message portrayal across the verbal channel and the visual channel is considered channel redundancy. A redundant message can potentially have more influence on the viewer. The importance of identifying and examining consistent media framing of a particular issue is realized when the social construction of reality is considered.

This chapter first examines the social construction of reality. It then discusses how the environment, as a construction of reality, has become an important public issue and what is known about the relationship of the media and the environment. Background is provided about an environment issue, specifically the Endangered Species Act, followed by a brief introduction to media framing. The chapter concludes with a statement of the problem and the purpose of this study.

Social Construction of Reality

A constructionist approach to social problems posits that there are no objective problems "out there." Problems are created or constructed through our interaction with

others and through media exposure. Under this approach, problems are based on perceptions and are socially constructed in the way people define them.

The current understanding of constructionism is based on symbolic interactionism, a concept explained by Herbert Blumer (1971, 1969), who based much of his work on George Herbert Mead. Mead (1934) developed symbolic interactionism to show the relationship between internal psychological processes and social systems.

Symbolic interactionism's three premises are: (a) human beings act toward things on the basis of meaning that things have for them, (b) the meaning of such things is derived from or arises out of social interaction that one has with one's fellow human beings, and (c) these meanings are handled in and modified through an interpretive process by the person in dealing with things which are encountered (Blumer, 1969). While individuals determine meaning through their interactions with others, social problems are products of a process of collective definition or collective framework (Gamson, 1992). Environmental pollution and ecological destruction are considered recent constructions (Blumer, 1971).

The social construction concept suggests that there is a difference between the "objective reality" or the thing that is really out there and the constructed reality. The constructed reality is based on interpersonal, cultural, and media clues (Gamson, 1992). Determining which of these influences is greatest is problematic because they are intertwined.

Events are "real," and physical changes do occur. Things really happen; they are not all perceptions. Events involve "transformations of the physical environment as a result of

continuous or sudden releases of energy, matter or information, or involved in perturbations in social and value structures" (Kasperson, 1993, p. 158). In other words, change in our physical world does occur whether or not it is observed, discussed, or considered a problem. However, these events remain unknown or limited in the social context unless "they are observed by human beings and communicated to others" (Luhmann, 1986 p. 63). The consequences of communication and other social interactions may lead to human-induced physical transformations such as changes in technologies and policies, and in methods pertaining to certain activities. The way humans talk and interact with a physical event can make a difference in the significance of that event and the media can play a critical role in these interactions (Gamson, 1992; Goffman, 1974).

Media Construction of Social Reality

The mass media, as a mode for social interaction, contribute to the interpretive process of attaching meaning to ideas, concepts and events. Media construction of social reality addresses the question of "How do media affect society?" The interaction of individuals and media messages is just one of the factors included with cultural influences and personal knowledge that influence individual's perception of their reality (Gamson, 1992). In other words, the messages and pictures the media provide contribute to individuals' understanding of the world around them.

Most people claim to get the majority of their information from the mass media, specifically television (Roper, 1988). Within the context of this study, most people claim to

get most of their environmental news from television (Hueber, 1991). Exactly how people actually get information through the mass media is the subject of much research and debate. Whether it is from direct contact with a media source or through friends and opinion leaders, people shape the meaning of the world around them from these experiences. The social construction perspective is important background for the examination of framing and its influence over what people think about issues and *how* they think about issues. Iyengar and Kinder (1987) suggested an extension of agenda-setting by the media. They suggest that viewers are not only affected by the amount of news concerning a certain issue, but also by the *kind* of news they see.

Conventional wisdom suggests that the media have a powerful effect on society. Lippmann said "News is not a mirror of social conditions, but the report of an aspect that has obtruded itself" (Lippmann, 1991, p. 13). The media are "social stations of amplification" (Kasperson, 1992, p. 159) in that they help issues "obtrude" or become important (e.g. Shaw and McCombs, 1973). The media are also important vehicles for social problems claimsmaking (Best, 1989; Spector and Kituse, 1977). Claimsmaking is the process through which "stakeholders" or those interested parties attempt to advocate or promote their position in a favorable manner (Riechert, 1996). By reinforcing and publicizing certain points of view, the media play a central role in the typification of events and the casting of problems in a certain light (Gans, 1979; Tuchman, 1979).

This typification of news events is a dominant source of an audience's basis for decision making and is the basis for the media framing concept. The way the media

consistently portray an issue becomes part of the foundation of information upon which people construct their reality. Gamson (1992) found that media discourse, combined with culture and personal knowledge, influence individuals' perception of reality and subsequently their construction of reality.

Neuman, Just and Crigler (1992) expanded on Gamson's model of constructionism by identifying seven general principles: (a) constructionism emphasizes an active, meaning-constructing audience, (b) it examines the interaction between the audience and the media rather than a media "effect," (c) it emphasizes the importance of the varying character of media content, (d) it emphasizes which medium and how that medium is used, (e) it examines what people think and how they think about issues rather than issue importance, (f) it is non-evaluative in that it looks at how people become informed rather than what should be changed, and (g) it compares how different issues are organized and structured in different media.

Gamson's model of examining culture, personal experience and media discourse combined with Neuman, et al.'s observation that constructed reality is based on how issues are organized and structured in different media suggests the study of media content can reveal potential influences on public opinion and policy implementation.

The character or quality of the information presented to the public, on which it constructs reality, has been criticized. Nimmo and Combs (1990) have claimed news coverage is confusing, sometimes contradictory, sometimes chaotic, but individuals build their reality upon it. They claim research should not focus on *why* certain "fantasies" are

derived and spread through television coverage, but *how*. The "content of the fantasies that are presented to TV viewers" should be examined (p. 25).

The issue chosen for this examination of issue organization and presentation in the news media is the "environment," a prominent public concern (Hueber, 1991).

Public Concern for the Environment

This section addresses the growth and fluctuation of the different aspects and trends of concern for and awareness of environmental problems. Because this study addresses patterns in media coverage, it is important to understand the historical, social, and cultural events and factors that may influence that coverage.

There are real physical environmental problems in the world. For example, solid waste is evident and global temperature changes occur, but the way those problems are perceived becomes a construct. The social construct examined in this study is the development of perceptions, definitions, and descriptions of wildlife issues within the context of public awareness of and concern for the general environment. A brief background is provided to help establish the social, cultural and historical context in which media framing occurs (Schlechtweg, 1996).

In the late 1800s, a "conservation movement" developed with establishment of national parks, wildlife refuges, national conservation groups such as the Sierra Club and the National Audubon Society, and hunting and sporting clubs (Tober, 1989; Reiger, 1975).

This movement focused on conservation of resources for people's use and enjoyment (Dunlap, 1993).

A second movement gaining prominence in the 1960s focused on preservation of the Earth for the Earth's sake. This "modern environmental movement" differed from "conservation" because it emphasized saving the environment rather than the conservation of resources for later use (Sachsman, 1996; Dunlap and Mertig, 1992). Membership in environmental activist groups during this period increased (Dunlap and Mertig, 1992; Dunlap, 1992). Results of public opinion polls indicated that the environment was an important issue and media coverage of environmental events increased (e.g. Dunlap & Mertig, 1992; Molotch & Lester, 1980).

Public concern for the environment dramatically increased in the 1960s until it peaked with Earth Day 1970 (Dunlap, 1992). People were ready to join together to express concern after the world witnessed live television pictures of their "Spaceship Earth" from the Moon , dead and dying oil-covered birds were seen gasping for life on Santa Barbara, California beaches (Molotch & Lester, 1980), and the Cuyahoga River in Ohio caught fire.

The first few years after Earth Day 1970 were critical in shaping activists' concerns, and these concerns eventually spread to the general public. Sale (1993) stated, "The concern was no longer just the impact of human society on the wilderness and its species; it now included the impact of human society on humanity as well" (p. 27).

Public opinion indicating concern about environmental issues ranked high in 1970, but interest then dropped, apparently significantly enough by 1972 for Downs to suggest

attention toward the environment was waning (Downs, 1972). Dunlap (1995) said Downs' (1972) issue-attention cycle was the most influential model for those interested in public opinion on environmental issues. Downs' model predicted social issues would progress through five stages: (a) the pre-problem stage when only elites and interest groups are aware of the issue, (b) the discovery by general public and euphoric enthusiasm about solving the problem, (c) realization of the high costs of a solution in which interest drops, (d) the gradual decline in interest and attention, and (e) the final stage where the issue is replaced by another.

The costs of "fixing" these conflicts has become a source of concern and also disillusionment. In the case of the 1200-plus Superfund sites, their toxic and hazardous waste remains undisturbed, despite the passage of time and allocation of billions of dollars. They provide ample proof of the enormous costs involved in cleaning up environmental problems (Barnett, 1994; Dunwoody & Griffin, 1993). The energy crisis in 1973-74 may have drawn attention away from general environmental concern; however, the environment as a social issue has not completed Downs' cycle by being fully displaced by other important issues. Concern did drop during the 1970s but interest has not disappeared; rather, it has remained relatively high compared to other issues that drop in public attention and interest (Dunlap, 1991). Environmental problems persisted with some very prominent crises such as contaminated soil at Love Canal, the Three Mile Island radiation leak, and EPA reports of major hazardous waste sites all over the United States. A great deal of

concern was expressed over problems with immediate impact, as well as those which could be easily observed such as air and water pollution (Molotch & Lester, 1980).

The 1980s saw similar, if not more dramatic, environmental problems. The dirt roads and soil in Times Beach, Missouri were found to be contaminated with cancer-causing chemicals; a chemical leak at the Union Carbide plant in Bhopal, India killed thousands; acid rain was killing trees; the nuclear plant in Chernobyl exploded (Cable & Cable, 1996); and the hot summer of 1988 focused attention on the previously little-known concept of global warming (Jacobson, 1991). The decade ended with the Exxon oil spill near Valdez, Alaska (Dunlap, 1993) and spotted owl and old-growth forest supporters pitted against loggers (Leibler & Bendix, 1996; Lange, 1993; Moore, 1993).

The first half of the 1990s experienced similar events. Pollution from the Persian Gulf War could be seen around the world and concerns continued over toxic Superfund sites (Dunwoody & Griffin, 1993) and ozone depletion (Jacobson 1991). In 1992 an "Earth Summit" was held in Brazil to help resolve global problems, and public opinion in support of the environment and concern over issues was high (Dunlap & Mertig, 1992). But clues to a possible drop in interest were apparent. In 1992 an "environmental politician," Al Gore, was elected Vice President, but fewer than 10 percent of the voters indicated that the environment was an important factor in their decision (Dunlap, 1995). This was a possible indicator that unless another major environmental issue surfaced, interest would drop; however, the environmental agenda was well established with the American public.

Dunlap (1993) said one can best understand the evolution of environmental problems over time by understanding the three competing functions of the environment: (a) providing living space, (b) a supply depot which provides for needs, and (c) a waste repository for storing waste. As the human population grows, these three functions have increasingly come into conflict with each other. By overusing nature as a waste repository, toxic and unpleasant waste has encroached into human and animal living space and damaged the supply depot. Now the conflict between the living space of animals and the supply depot for humans has become a major problem. For example, the spotted owl and its living space struggles against the loggers and their timber supply depot in the northwest (Leibler & Bendix, 1996; Lange, 1993; Moore, 1993).

Research showed public opinion on the environment varied depending on whether people espoused the "Dominant Social Paradigm," which advocates development and growth and development or whether they support the "New Environmental Paradigm," which emphasizes preservation (Van Liere & Dunlap, 1981; Van Liere & Dunlap, 1980). The distinction between the two are important because they identify an underlying difference in approaching environmental problems.

The Environment as an Issue becomes Embedded in Society

Survey after survey has indicated that Americans considered the environment a serious problem. In 1990, a CBS television poll in 1990 reported 74 percent of those questioned said that protecting the environment was so important that "no standards should

be set too high" (Sale, 1993, p. 80), and over half of the respondents strongly identified with environmentalism. Another recent national poll found that 76 percent of Americans called themselves environmentalists and 50 percent contributed to environmental organizations (Hueber, 1991).

Through the years over half of the people surveyed in most polls have consistently said that the government spends too little on environmental protection (Ladd & Bowman, 1995). Results of opinion surveys indicated percentages ranging from just over 50 to 70 percent of those surveyed said environmental quality is possible along with economic growth (Dunlap & Scarce, 1991; Ladd & Bowman, 1995). People were also willing to make some changes in how they live in order to achieve an improved environment. Some changes include recycling, banning CFC products, reducing water use, and reducing food packaging (Lake, 1990).

The trend of public opinion on the environment suggests that environmentalism has attained a high degree of credibility and legitimacy in our society (Dunlap, 1991), with public support for the environment in the early 1990s reaching an "all-time high" (Dunlap & Scarce, 1991). The twentieth anniversary of Earth Day in 1990, the spotted owl controversy, and the Earth Summit in Rio de Janeiro in 1992 helped to keep the issue prominent in people's minds. The public is very supportive of environmental protection and wants something done about it (Dunlap, 1991; Dunlap & Scarce, 1991).

Sale (1993) suggested that one of the major accomplishments of the nearly three decades of the environmental movement was that environmentalism has become embedded

into almost every aspect of our lives; in the classroom and workplace, in legislation; in governments, from local water departments to national administrations. The number of social movements concerned with environmental issues has increased, as well as pro-development and business groups concerned about the excessive strength of environmental lobby (Dunlap & Mertig, 1991).

The environment is an important issue in society and groups have emerged to support and defend certain aspects of public policy development and enforcement. One way people learned about the environment was through the mass media.

The Influence of Mass Media on Public Opinion Concerning the Environment

The following statements are taken from prominent writings about public opinion and the environment.

> Direct mail, in addition to the constant media coverage of environmental problems, has combined to keep the public aware and concerned about such problems (Mitchell, 1990, p. 14).

> Media coverage of local environmental struggles as well as citizens' direct participation in these campaigns apparently have played an important role in increasing public support for environmental protection (Freudenberg & Steinsapir, 1992, p. 35).

> Television carried these images (referring to the 1969 Santa Barbara oil spill) into homes, igniting greater environmental concern among the public (Cable & Cable, 1995, p. 69).

> In the 1980s there was increasing societal recognition of continual, unanticipated environmental deterioration partly because of the stimulation by media attention (Dunlap & Mertig, 1992, p. 5)

A major assumption stated by these authors is that the media have a powerful influence on public opinion and an ability to raise awareness about the environment. This section addresses those assumptions and explores the theories which drove media research in the past and those theories that currently guide research on media and public opinion on the environment.

As stated in the previous section, environmental interest is high and the public gets most of its information about environmental issues from the mass media (e.g. Gallup, 1990; Sellers & Jones, 1973). Indeed, Schoenfeld (1972) stated the mass media are credited with being the "midwives" of the environmental movement. "From the perspective of history there have been few more dramatic examples of the response of a free mass media to a public issue than the irruption in environmental news in the 1965-72 era" (Schoenfeld, 1972, p.1-2).

Media and environment scholars state that in the late 1960s the media "finally awoke" or "discovered" the environment (Sachsman, 1996; Sale 1993). Media coverage peaked in 1970 with front page articles and cover stories in *Time, Newsweek, Life, Look* and the *Washington Post* with headlines like "The Ravaged Environment" (Schoenfeld, 1972). The environment issue had assumed the dimensions of a vast popular fad and the media covered it all the way.

The meaning of concern for the environment was changed when pro-development forces and industries attempted to position themselves as environmentally conscious

entities. Companies have attempted to attract the attention and business of environmentally concerned consumers through marketing and advertising plans associating "green" with their products (Shanahan, 1993). Additionally, many businesses have opted to promote and market their products made from recycled and "recyclable" materials (Paystrup, 1996). Traditionally industry has been in opposition to environmentalists, but when businesses portrayed themselves as being concerned about the environment, the boundaries between the environmental and pro-development become blurred.

Environmental problems exist in the "objective out there" and problems exist in the "constructed out there," but if the media have such a powerful effect, a major question is "Why environmental communications from the mass media have failed to significantly mitigate our collective descent in to the ecological inferno?" (Cantrill, 1992).

Television and the Environment

Prior to the commercial development of radio, limited groups were exposed to several influential conservation-oriented media. These included nature books from writers such as Thoreau and Muir, sport and hunting magazines, nature lectures from the staff of *National Geographic* and *Audubon*, and a few Hollywood films. They contributed to an initial understanding of nature and the need for "conservation."

However, a true mass medium with a large undifferentiated audience was not available until the development of radio and eventually television (Shaw, 1991). Television programming as a whole is a key player in the way the culture receives and interprets

messages (Gerbner & Gross, 1976) and can provide images of the environment (Shanahan, Morgan & Stenbjerre, 1997; Shanahan, 1993) through popular wildlife shows like *Flipper* and *Gentle Ben* (Smith, 1996; Lester, 1988).

Television is especially important in determining how people react with the animal kingdom because most of what people know about animals comes through visual mass media exposure (Kellert, 1979).

But other research indicates that people do not act upon the information provided by television concerning environmental issues. The theory of cultivation posits that exposure to television contributes to viewers' overall conceptions of the real world. Those viewers who watched greater amounts of television were found to be slightly less environmentally oriented and less knowledgeable about environmental issues than lighter viewers (Shanahan, et al., 1997). Shanahan et. al. recalled Wiebe's (1973) "well-informed futility" as an explanation of television exposure and the lack of concern for and knowledge of environmental issues. People know more about some issues but do not act upon that knowledge in a way that improves environmental conditions.

Wildlife Issues and Media

Two great debates over wildlife and property rights issues have occurred. The first began with deer seasons and wolf bounties during colonial times. The basic premise then was that some animals of value should be regulated and their numbers managed and maintained while all other animals were useless and even harmful (Tober, 1989).

The second wildlife debate began by addressing issues concerning all animal species. It began in the mid-1800s with specialty magazines and books carrying the works of nature writers such as Emerson, Thoreau, and Muir to a limited, elite audience. While some of their books were not widely circulated at the time they were written, by the turn of the century they were revered by loyal conservationists (Tober, 1989). Periodicals appeared representing hunting and sporting clubs. Publications such as *American Sportsman* (1871), *Forest and Stream* (1873), *Field and Stream* (1874), and *American Angler* (1881) advocated the end of commercial exploitation of wildlife. The nation's industry was on the move and any natural thing that could be converted into cash was utilized and was consequently placed in a potentially threatening situation (Reiger, 1975).

Hunting clubs and national groups such as the Sierra Club and the National Audubon Society supported state and federal laws regulating wildlife. By the early 1900s national parks and wildlife refuges were in place with accompanying legislation. The ominous message sent by the extinct passenger pigeon and the nearly extinct bison demanded attention. William Hornaday published *Our Vanishing Wildlife* in 1913 and brought the need for conservation before the public (Mighetto, 1991). Concern by sports hunters and bird lovers continued the emphasis on specific animals when problems were observed. Early radio programs focused on capturing animals for zoos and the treatment of animals in relation to their use and purpose for man (Smith, 1996).

During the 1960s, television became the national hearth around which an entire nation gathered to be informed and entertained. The country developed a shared national

consciousness by sharing experiences, albeit in millions of different locations across the county. During this decade, television matured technically with the use of color images and fledgling satellite technology, and television news matured with the initiation of longer newscasts as the country collectively fretted over the Cuban missile crisis, mourned tragic assassinations, and observed civil rights conflicts. Through television the country tallied daily death counts from Vietnam and experienced the turbulent presidential campaign of 1968.

The United States' space program made history with the first live television pictures of outer space from Apollo 8 in 1968. Just a year later, Neil Armstrong's and Buzz Aldrin's Moon landing was seen live across the world (Howard, et al., 1994). These pictures from space showed dramatic images of "Spaceship Earth," images that would prick a national conscience by showing that we are all together on this planet and together we had better take care of it (Cable and Cable, 1995).

During the same year as these moving pictures from space, Americans were exposed to dramatic pictures of environmental destruction. The maturing television news provided riveting coverage of the Santa Barbara oil spill, showing tar-covered birds gasping for breath (Molotch and Lester, 1980). The second wildlife debate was at its peak and humans had to decide how they were going to care for this spaceship-planet and all of its passengers, man and animal alike. With the United States' history of interest in and legislation dealing with wildlife protection, the scene was set for the Endangered Species Act.

The Endangered Species Act

The country was ready to legislate protection of animals and several pieces of legislation preceded the Endangered Species Act (ESA). The National Environmental Protection Act in 1966 was an umbrella law which laid the foundation for the protection of marine mammals, bald eagles, wild horses, and other wildlife. By the early 1970s, a concern over the reduced numbers of certain species was high, and this helped push through the Endangered Species Act in December of 1973. The Act states that due to human activities involving land and resource use, animals have become extinct or are in danger of extinction. The Act authorizes the US Fish and Wildlife Service to identify threatened animals and plans to recover them. The ESA has come under intense scrutiny by those who believe the Act is overbearing and think any legislation needs to pay more attention to economic concerns and the impact to humans and personal property rights.

Congress was scheduled to renew the ESA in 1992, but delayed debate while the dispute continued between those protecting the spotted owl and the logging industry. The Supreme Court determined in June, 1995 that the owl and biodiversity can be favored over private property rights. The spotted owl controversy illustrates the struggle between legitimate but conflicting philosophies, resulting in policy compromises which few find satisfying (Prato, 1991). The spotted owl has become the symbol that crystallizes the differences in the economy versus environment issue (Prato, 1991). On May 9, 1995 a senate bill to re-authorize and reword the ESA was proposed by Senator Slade Gordon of Washington. The pending bill, written in part by logging industry lobbyists, would force

consideration of private property and economic impacts in ESA decisions (Endangered Species Act Re-authorization, 1995). A similar bill was introduced in the House of Representatives, but as of the summer of 1997, a re-authorization has not been passed and the Act continues to be enforced under existing regulations.

Many different groups promoting distinct aspects of animal protection and animal rights have formed as part of the general environmental movement and those attempting to protect business, private property and economic freedoms have assembled as well. Understanding the various claimsmakers, actors, and definers, and understanding how the media may reflect and represent the different viewpoints on this controversial issue is important in achieving some consensus on the matter (Kohm, 1991).

Concern for endangered species is one of the reasons the environmental issue has escaped completing Downs' (1972) issue-attention cycle and avoided falling into the fifth stage or loss of public attention. The success of maintaining interest in endangered species issues can be explained by the emergence of new environmental problems, media attention to those problems, and the continued vitality of the environmental movement (Dunlap, 1995). Scientists continue to discover new species and can now better document threatened and extinct species. This results in new information about endangered species being made available on a continuous basis. Environmental catastrophes, beginning with the Santa Barbara oil spill in 1969 and most recently with the *Exxon Valdez* tanker leak have kept the environment and wildlife destruction in the forefront of news coverage.

The media have contributed to and responded to this environmental concern by providing "enormous attention" (Mitchell, 1990). Mazur and Lee (1993) provide evidence that the national media have recently increased coverage of global issues. The endangered species issue has been co-opted by concern for the rain forests and concern for preserving full ecosystems (Dunlap, 1995).

In recent years a "backlash" against environmentalism has surfaced in the form of industry-supported and pro-development supported groups such as the "Sahara Club" and the "Wetland Coalition," who are essentially subparts of the "Wise-use Movement." These groups are attempting to influence the reworking of the ESA to include language which takes economic and private property issues into consideration when dealing with threatened and endangered animals (Paystrup, 1996).

With these known ideologically opposed groups competing to build the media's agenda and present their frames, there is an opportunity to study how media have handled the issue and whose frame is presented in the mass media.

Media Coverage of Endangered Species

Media coverage of endangered species corresponds with the development of the environmental movement. Indeed, it has been stated that conservation began with animals (Reiger, 1975) and people found out about animals through the media. Media coverage of threatened wildlife has continued to be popular because "the image of furry animals drawing their last breath is a poignant one" (Yaffee, 1982, p. 32). During the height of the 1970s

environmental awareness the United States was in the midst of a human population explosion as described by Erlich (1968) in *The Population Bomb.* The human population was growing at an ever-increasing and alarming rate. At the same time, animals were on the opposite track--extinction. Media attention continued with environmental issues, human population problems, and animal extinction rates, but other major news stories replaced the environment. The ESA was considered the last of the major environmental acts passed before Watergate and the oil embargo took away the attention of the nation and the media (Yaffee, 1982).

The study of endangered species provides an interesting vehicle for examining media framing and claimsmaking that occurs in the public arena. Some ESA issues are "products of the media" and have been portrayed as an all-or-nothing conflict (Yaffee, 1982, p. 143). While debate continues about whether certain animals are indeed threatened and endangered, examining ESA coverage allows examination of a socially constructed problem because problems are defined by various claimsmakers and the media (Spector and Kituse, 1972; Best, 1990).

Americans were concerned about wildlife long before the advent of television as evidenced by the establishment of national conservation groups and national parks and refuges before and after the turn of the century (Tober, 1989; Reiger, 1975). But now many debates concerning man's relationship with and responsibility to wild animals and related legislation occur through the mass media (Kellert, 1979). Television particularly contributes to this situation through its propensity to focus on conflict between people advocating one

position or another (Greenberg, et al., 1989). These claimsmakers are from government entities, the environmental community, and industry, and they all attempt to influence how the issue is seen and how it is defined; in essence, how the issue is framed (Leibler and Bendix, 1996).

Television intensifies the debate with the use of vivid images (Sachsman, 1996), depicting animals in danger of extinction and various industry workers threatened by unemployment due to regulation (Lange, 1993; Moore, 1993). The animals chosen for news coverage are the same animals critics claim receive the majority of ESA restoration funds. These animals are considered to be large and charismatic animals such as the bald eagle, the gray wolf, and the California condor, which provide interesting pictures for television news coverage (Kohm, 1991).

The process of selecting certain pictures, selecting certain interviewees and consistently using certain words helps to establish the media frame. To aid in understanding media framing, the historical background on framing in general as part of the social construction process is examined.

Framing

Media framing, as a theoretic approach, can be considered a vehicle of social construction and is central to understanding the media's role in the environmental debate. Framing can be identified as a part of all communication as individuals attempt to make sense of the world. Individuals actively interpret what goes on in the world through a

"primary framework." Through this framework the individual can locate, perceive, identify and label a seemingly infinite number of occurrences defined in its terms (Goffman, 1974).

The term "frame" is commonly used to describe many different activities. A person's frame of reference describes the structure of concepts, values, or views by which an individual or group perceives data and communicates ideas. A framework is the skeletal structure designed to enclose or support something and a frame of mind refers to a particular state. Because of these common uses, the terms frames and framing can take on many different meanings, however, most of these definitions describe a process of preparing or constructing a basis upon which future action takes place. This helps in understanding that framing is nothing by itself, but prepares, shapes and supports other actions.

The framing process occurs on the sociological level, the individual psychological level, and through and within media organizations. The process of "making sense of the world" is evident in mass media news coverage as issues are selected and presented. The framing rubric can be useful in understanding public opinion development as a result of media influence (Entman, 1993).

Framing from a Sociological Approach

Bateson (1972) used the term "frame" when he discussed his animal studies and described the process of instructing the receiver or helping the receiver to understand the intentions of a message in the communication process. Bateson observed monkeys who were able to distinguish somehow between "play" biting and "fighting" biting. The animals

were able to communicate something about their communication and behaviors. In other words, Bateson observed animals could "communicate about communication" by saying this action is play and not combat.

Messages can be on two levels; the report level conveys the information or "facts" while the relationship level classifies or frames the content in a form of "metacommunication" (Rogers, 1994, p. 96). The relationship level places framing in the social context. The association between the report level (information) and the relationship level (classification or frame) constitutes a total frame.

Erving Goffman (1974) built on that concept and is recognized for describing how individuals organize their experiences in order to enhance communication and understanding. Certain segments of action are selected from the continuous stream of social interaction and placed in familiar context in order to make sense of them. He focused on individuals, but through examples from popular culture media, such as news media, he examined how information is organized in society. His book *Frame Analysis: An Essay on the Organization of Experience*, examined how individuals frame their world in certain ways in an attempt to understand what is going on around them. His inquiry was driven by the questions "What is going on here?" and "Under what circumstances do we think things are real?"

The Psychological Approach

The research of frames on the individual level relates them to schemas, which are cognitive structures of organized prior knowledge, abstracted from experience in specific instances (Eagly & Chaiken, 1993). While schemas are cognitive structures , they are also thought "to elicit affect as well as inference" (p. 18). This is based on the idea that comprehension and memory for stimuli are improved if some label, category, or concept is also presented to enable people to organize stimuli in some way. Framing, as a type of schema theory, postulates that people develop mental images to help them select and organize information in meaningful ways (Graber, 1988). Graber says schemas perform four major functions: (a) they determine what information will be noticed, processed and stored; (b) they help individuals organize and evaluate new information so that it can be fitted into established perceptions; (c) they make it possible to go beyond existing information and fill in the missing information in order to make sense of incomplete communication; and (d) they help solve problems (p. 31). All of these functions are useful because they help determine how people assign meaning to incoming information.

The Relationship of Media Framing to other Popular Media Theories

With both a sociological and psychological approach to framing, one can see how the news media can perhaps set the frame for the individual, thus having significant effects on society. The media can select certain portions of an event or activity and fulfill Graber's four functions of schemata. Additionally, the media can determine what information will be

noticed, organize it into established categories, fill in missing information, and provide solutions to problems (Graber, 1988). If all of this occurs, the potential for strong media effects is established. Prior to the emergence of framing as a mass media theory, other theories were developed which attempted to explain how the media affect individuals and society.

People can be dependent on the media for their versions of reality. This describes the dependency theory of mass communication (Ball-Rokeach & DeFleur, 1976). The theory posits that in simple cultures people's realities are based on personal experience and socialization.

In 1972, Shaw and McCombs published a seminal study about the agenda-setting function of the media. They argued that the media do not tell people what to think, but they tell people what to *think about*. Based on a comparison of public opinion polling and media content analysis, they showed correlation coefficients between what the media considered important and how the public subsequently rank-ordered those same issues. The media apparently do have some influence on what people generally think is important. This same effect has been found with environmental issues (Caldwell, 1992; Atwater, Stern, Dietz and Black, 1985/86; Salwen and Anderson, 1985).

Agenda-setting researchers have been careful, however, to paraphrase or quote Cohen (1963) in pointing out that the media determine which issues are important, but do not tell people what to think about these issues. The newer concept of media framing helps

explain that the media can tell people which issues are important *and* they can tell people what to think about those issues (Goffman, 1974; Gamson, 1992).

Media framing addresses much of the criticism and weaknesses of agenda-setting. Because agenda-setting does not fully explain how people develop ideas from the mass media (Trumbo, 1995), other theoretical approaches have been pursued. Media framing is developing as a major contributor to the understanding of how audiences interact with mass media to form opinions which may influence some behavior (Entman, 1993; Iyengar, 1991). Agenda-setting has been criticized for testing only one-time cross sections and only looking at issue salience and removing the context of the issue (McQuail, 1987). While newer models of agenda-setting have been developed, the focus continues to be on issue salience or importance (Brosius & Kepplinger, 1992; Rogers & Dearing, 1988).

Framing looks at the issue in context and *the way* the issue is handled in the media. Kosicki (1993) said "If the initial phase of mass communication research involving media and public issues examined primarily what topics made it onto the public agenda, the next phase is likely to examine how the issue is framed and discussed" (p. 117). Media research should be extended to framing (Benford and Snow, 1988).

Framing Devices

There are various ways of examining media framing. One approach is to look at the *framing devices* or specific characteristics of the text that can "communicate about the communication" (Rogers, 1995). Other framing analysis techniques can include focusing on

event versus thematic coverage (Hertog and McLeod, 1995) or crisis versus chronic coverage (Singer and Endreny, 1993).

Framing devices are words, catchphrases, symbols and images used to determine how the issue is defined; therefore, specific characteristics can be categorized as various framing devices. Framing devices are the vehicles by which meaning within frames becomes apparent in media discourse. Pan and Kosicki (1993) identify four relatively abstract devices that can create an overall frame: syntactical structure, script structure, thematic structure, and rhetorical structure. These devices have been examined in the context of media framing (Hartley, 1982; Gans, 1979; Tuchman 1978). Other researchers have identified more concrete framing devices such as keywords, catchphrases, visuals, metaphors, stereotyping and symbols that are used to determine how a public policy issue is defined (Entman, 1993; Best, 1990; Gamson and Lasch, 1989). Claimsmakers use these devices to influence public policy. Identifying who the claimsmakers are addressing and shaping the issue is one of the important factors in defining the issue (Gamson and Lasch, 1989; Best, 1990).

Framing devices are used by individuals and institutions who become claimsmakers as they attempt, in their own interests, to address, define, and shape issues (Best, 1990). This "framing-by-claimsmakers" process is a critical component to the understanding of how media function in our society (Entman, 1993; Best, 1992). This study attempts to identify relationships between the specific media framing devices involving visual messages in order to improve understanding of the framing process.

The media are also information receivers, influenced by others. Some claim that certain interest groups, such as advocacy organizations, government information sources, and public relations practitioners, sometimes called media elites, have extreme power over what the media determines are important issues and how to talk about them (Reese, 1990). These elites are essentially establishing the frame which often is the message transmitted to the public (Gitlin, 1980). How the public uses that information is still an important area of research as reception of certain messages is difficult to prove. Gamson and Modigliani (1989) said, "Smart sources are well aware of the journalist's fancy for the apt catchphrase and provide suitable ones to suggest the frame they want" (p. 3). Tracking the catchphrases and words used by competing claimsmakers, anchors and reporters in the context of a specific issue is a way to explore how the issue is portrayed and defined differently by different media players. Examination and tracking of catchphrases used in framing the Endangered Species Act can provide valuable information in understanding the framing process.

Statement of Problem

The problem, briefly stated, is that there is a lack of understanding about media framing of controversial public issues such as endangered species. The problem to be addressed here is the need to gain a better understanding of the television news media's contribution to the construction of a social problem. Researchers continue to grapple for clues as to how the media shape and influence society. This study examines the relationships

among newscaster narration, interviewee statements and the visuals. This examination helps determine differences and similarities in the structures, organization, and patterns used as media framing devices resulting in the potential for issue definition. The Endangered Species Act provides fertile ground for examination as several claimsmaking groups attempt to influence and shape media coverage which is believed to influence public policy.

Media framing is a developing area of media research and promises to expand understanding of how people use information derived from media messages. Media framing can be broken down into its component parts or framing devices in the attempt to determine potential influence on public policy implementation. To achieve this, the visuals, as framing devices were examined as they were presented in relation to the claimsmaking embedded in the text of the network story. Past studies have not taken the approach of carefully examining the smaller parts in order to understand the whole. Most framing studies have take the "general frame" approach and justified it through intercoder checks. This study attempts to quantify the parts of a news story in order to understand the whole.

Purpose of Study

The purpose of this study is to micro-analyze the framing devices employed for a specific environmental problem, endangered species, as portrayed on network television news. The study will examine and compare the patterns in the use of visual and audio framing devices associated with claimsmakers over a 29-year period in order to identify consistencies in presentation of a public policy issue presented on network television news.

The general question to be addressed is, "How are public policy issues framed by the mass media?" A more specific question discusses television: *How do the visuals in television news relate to the text framing of an issue?* A redundant or synchronous message with visual and textual mutual support, has more potential for frame resonance or the reinforcement of familiar and sensible ideas (Grimes, 1991; Graber, 1988; Drew & Grimes, 1987).

In addition to the visual and textual information in news stories, there are many proponents vying for media coverage to advocate a certain position on an issue. The media can lend credibility to these proponents or they can expose weaknesses of these sources. The media become secondary claimsmakers by re-transmitting information from other claimsmakers, thus reinforcing and legitimizing certain aspects of an issue (Best, 1990; Best 1989) or marginalizing certain people and arguments (Gitlin, 1980). This continues the social construction of an issue. By selecting events to report, by interviewing and quoting experts who interpret those events, and by assembling and distributing news products, news organizations create a source of material from which the public defines an issue. The reality for most of us exists mainly in images created by others (Stallings, 1990).

The implications of this study concern the current practices of television news, which is considered to be the most important news source for most people. The implications can be extended as various new media technologies such as cable, computer mediated communication, and advances in telephony-related visual communication become more

important as the public's source for information, which subsequently influences public policy development.

Definitions

Television network news coverage is defined as those stories shown on the nightly news which cover endangered species issues. These stories can be short "readers" or longer reporter-narrated "packages." For the purpose of this study, a story refers to those items that have a separate listing in the Vanderbilt Television News Archives, which was the source for the videotape to be examined.

Media framing, for the purposes of this study, is defined as the selection and salience of framing devices such as keywords, catchphrases, visuals, stereotyping, and symbols by claimsmakers in the attempt to promote or advocate a certain definition of an issue (Entman, 1993; Best, 1989; Gitlin, 1980). Keywords are the high-frequency words in the text, and catchphrases are an extension of the keywords, as they are frequently used together. Claimsmakers are those selected as interviewees in the television news stories. Presentation structures refer to the story as a reader or package. Visuals are the types of shots selected considering the distance from camera to subject and the content of the picture. Associated with visuals are editing techniques, which refer to the length of each shot and the number of shots. Stereotyping and symbols are those "persistent" and routinely used catchphrases and keywords used by claimsmakers to represent and define an issue (Gitlin, 1980). Message redundancy is the reinforcement or duplication of a message

through multiple media channels, such as through audio and video message. The redundancy of messages across verbal and visual channels supports the concept of concept or media salience, an important concept of media framing.

This study fits well into the existing literature as it uses concepts and techniques already tested under the framing rubric, and it extends framing to include more examination of the visuals and specific framing devices used in network television news. Previous studies have ignored visual aspects of framing devices. Many studies have examined the framing of environmental issues, but most have discussed the visual message superficially.

A better understanding of these processes is of vital public concern because of the perceived power and influence the media exercise on an environmental issue such as the extinction of endangered species, which some view as a threat to human life itself. Others view excessive government regulation and inappropriate consideration of animals over humans as a threat to their livelihood and economic well-being. A better understanding of the media's involvement in this issue may lead to the development and implementation of better public policy. The claimsmaking that occurs in media discourse influences debate on issues.

National television news coverage is selected for analysis because of its dominance as a mass medium during the study's time frame, 1968-1996. The words and phrases used by claimsmakers, including interviewees, and broadcasters, will be pared to the pictures used. Claimsmakers direct attention toward and away from certain definitions of problems (Best, 1989). Do the visuals respond to those same influences? The redefinition of an issue

or problem is based on the selection of what is emphasized and how it is reported in the media. (Entman, 1991; Graber, 1991). Do the visuals emphasize what certain claimsmakers may want emphasized? Many news items compete for coverage and due to network news time constraints, once an issue is covered in some degree, air-time is relegated to other issues (Greenberg, et al. 1989).

This project examines a small portion of media framing in the context of social construction of reality by the media. The general area of interest is: What are the factors that contribute to how the media portray certain aspects of life? Television news and the environment are used as vehicles to examine these relationships.

Polls show the environment is considered an important issue today (Hueber, 1991). People are concerned about health, risk, quality of life, and the aesthetic aspects of their surroundings (Singer and Endreny, 1993). Environmental public policy has been implemented based on these concerns (Dunlap, 1993). Because the media, and especially television, are considered factors in the development of public opinion and consequently public policy , it is important to better understand television's relationship to public opinion formation. Understanding television's framing of a certain issue is a good place to start.

This study examines media framing of environmental issues on network television news in an attempt to further the understanding of how frames are built from the visual and audible devices of a television news story. The Endangered Species Act was selected because the issue has several unique characteristics which allow for framing examination. The ESA is an issue under current legislative debate, it presents opportunities for various

claimsmakers to define the issue, it has high public interest, it has dramatic and emotional visual components, and it has a life span long enough to examine trends and patterns.

Research Questions

The general research question is: "How are public policy issues concerning endangered species framed by the network television news?" Specific research questions are:

1. What is the general nature of stories concerning endangered species on network television news? This addresses the "objective" structure of the stories such as year, length, and type of story (read by the anchor or a reporter-narrated package with pictures).

2. What are the keywords, terms and phrases used in stories about endangered species? This question addresses the words and phrases used by anchors, reporters, and claimsmaker-interviewees in the television stories.

3. What pictures showing claimsmakers concerned about endangered species issues are typically used in network endangered species stories and how often and how long are they shown?

4. How are the pictures of claimsmakers and their words used together in network news stories about endangered species? What is the relationship between verbal messages and visual messages in these stories?

The answers to these questions can provide significant understanding of television, a medium considered to be very influential in the construction of reality concerning

environmental issues. With information about how the media have framed the ESA, journalists can better understand the pressures under which they operate, interest groups can better understand their influence on the media, and government leaders can better understand the processes that may influence public opinion, which may lead to implementation of certain public policies. Media consumers or the general public can better understand how framing is evident in media messages, which may exert some influence over their attitudes, opinion formation, and subsequent public policy development.

To achieve an understanding of the framing process, however, one must first break the framing process down into the component parts or the framing devices in order to carefully scrutinize the possible factors and variables involved. This study is a first step, using content analysis informed by framing analysis to draw a clear picture of how the media may influence public policy.

Description of Chapters

This chapter has presented an introduction to the concepts of social construction, media framing and public opinion on environmental issues as well as a background about media coverage of environmental issues and historical background on framing. It has presented the statement of the problem and purpose of the study. The next chapter will examine the existing literature concerning where media framing is positioned in relation to other framing research. It will also discuss television news and the process that influences

the visual nature of the television medium and research which describes how to best content-analyze television news. Chapter 3 details the methods used in this content analysis along with the specific hypotheses to be tested; Chapter 4 reports the results of statistical analysis, and Chapter 5 presents conclusions drawn from the analysis.

CHAPTER 2

LITERATURE REVIEW

This chapter identifies the pertinent literature related to media framing of environmental issues and the way words and pictures are used in television news framing. The chapter moves from general to specific by placing framing research into effective categories which permit examination of related concepts. The term framing is used to describe various phenomena in the realm of human communication. The first section describes the various uses of framing and begins to focus in on media framing. Within media framing, research has often focused on claimsmaking or the attempt by advocacy groups who have a stake in a particular controversial issue to define and set parameters on the issue. The chapter moves into a more narrow focus as it presents the concept of framing devices, which are language and symbol mechanisms through which meaning and intent are indicated. Quite often these are words and images repeated and promoted by a claimsmaking group. The characteristics of television news with the news values and presentation structures that impact utilization of claimsmakers and framing devices are then presented. These include examination of story styles, production techniques, and the verbal and visual components of television news. The concepts related to these areas will be explained and defined, leading to a foundation for the research questions and propositions addressed in this study.

Framing - Comprised of Ambiguous Concepts

Framing is an established theoretic rubric as it now appears in undergraduate introductory mass media textbooks (e.g. Straubhaar and LaRose, 1996), and graduate level communication texts (McLeod, Kosicki & McLeod, 1995), and makes regular appearances in the scholarly journals (e.g. Liebler & Bendix, 1996; Entman, 1993; Pan & Kosicki, 1993; Iyengar, 1991). However, because of its broad application there continues to be an inconsistent definition and identification of the process. The term framing is used interchangeably among disciplines as varied as political science, sociology, psychology and communication when discussing what are really distinct phenomena. Political scientists, psychologists, sociologists, and communication scholars all claim the framing rubric and use it, describing, and defining it within the context of their particular disciplines. No model has been developed that explains how framing relates within and between the various fields. As technological advances bring media convergence, contexts of framing may also merge and converge, making precise contextualization of framing research critical for further development of the potentially powerful framing theory. As the scope and the concepts of framing theory are identified, the opportunities increase for future research.

In 1993 Entman stated, "Nowhere is there a general statement of framing theory that shows exactly how frames become embedded within and make themselves manifest in a text or how framing influences thinking" (p. 51). The assumption, based on the social construction of reality approach, is that framing "has a common effect on large portions of the receiving audience though it is not likely to have a universal effect on all" (p. 54).

Entman hoped framing would bring disciplines together with a shared definition and precise analysis of how "influence over a human consciousness is exerted by the transfer (or communication) of information from one location, such as a speech, utterance, news report or novel--to that consciousness" (p. 53). He called for the identification of explicit common tendencies among framing terms and a more precise universal understanding of them. While Entman's call to "defracture the framing paradigm" has occurred in some degree, in many ways because of the popularity of the framing term, use has increased and has become even more fractured.

While Entman's research and his call to defracture the paradigm provided a major contribution to clarifying framing concepts, the problems and challenges he addressed due to fragmentation continue. "Great strides have been made in understanding people opinions, but concerning the communication process, on how they get there, on what the issues mean to people and how they reach their conclusions, we are still groping" (Gamson, 1992, p. xi).

This section synthesizes selected existing literature on framing into a model useful for identifying relationships between the current framing concepts, dominant communication theories and the other disciplines contributing to framing theory, with a particular emphasis on media framing. The purpose is to continue the identification and clarification of framing concepts, a precision necessary for the development of a more useful and elegant theory of framing.

The problem is that framing can be many different things to different researchers because of the variety of potential locations and levels of specificity. This lack of precision

results in journal articles with titles such as *News Coverage of the Gulf Crisis and Public Opinion: A Study of Agenda-Setting, Priming and Framing* (Iyengar & Simon, 1993) or *Media Coverage of Political Issues and the Framing of Personal Concerns* (Iorio & Huxman, 1996). These titles suggest framing occurs on many levels and in many locations. These levels range from specific intrapersonal communication to general cultural and public messages (Schoen & Rein, 1994). With locations ranging from individuals to institutional senders, receivers, and messages.

Framing, as a field of research is relatively new, but research has generally not been placed in context with other framing research. This is particularly true with mass media research. A typical literature reviews in a scholarly journal article on media framing may cite Goffman (1974), who describes social influences, and Kahneman and Tversky (1984), who introduce psychological perspectives, and then the article may move onto Gitlin (1980), Gans (1979), and Tuchman (1979) for media analysis. This process unintentionally avoids placing the research in the context of the various disciplines. Unless research is contextualized, it loses rigor and explanatory power. Context is an important step in locating and defining concepts.

It is time to step back and ask the question Goffman (1974) presented in his conceptualization of framing. He said frame analysis asks the question, "What is going on here?" Now it is time to ask the same question concerning framing research--what is going on here with framing theory?

A model is therefore proposed. This model, adapted and modified from other scholars, helps to distinguish the various areas, tracks, and emphases of framing research and allows positioning of concepts for better clarification and explication. One researcher suggested mass communication research is experiencing a "paradigm shift" which focuses more on the social construction of reality enabled by 'framing' through 'discourse' (Beniger, 1987, p. S53). The proposed model allows scholars to better position their research within the existing literature and better isolate specific framing concepts that often lose precision because they are casually associated with inapplicable areas.

Definition of Framing

A clear definition of framing must be agreed upon before identification of the framing phenomenon in different contexts is possible.

Framing is basically the selection and organization of words and pictures considered important. Framing is the implicit organizing ideas (Gamson, 1992) guiding the selection and salience of symbols within the phenomenon of human communication. Because the framing process occurs simultaneously in and reciprocally between individuals, social groups and media institutions, isolating and understanding the framing process is complicated. Definitions often vary slightly depending on the context.

By selecting certain elements and leaving others out within the communication process, the framing process begins. By placing importance or emphasis on certain elements of an issue, framing continues. Hertog and Mcleod (1995) said framing determines what

available information is relevant and by omission of certain information, determines what information is irrelevant. Any phenomenon is radically changed by what is prominently displayed, what is repressed and how observations are classified (Edelman, 1993). Entman (1993) offers a good definition of framing.

> Framing involves selection and salience. To frame is to select some aspects of a perceived reality and make them more salient in a communication context, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and treatment recommendations (p. 52).

Entman (1993) explained that frames define problems, diagnose causes, make moral judgments and suggest remedies. Others define framing as the connection between qualitative features of news and public opinion (Iyengar & Simon, 1993); the tasks of making sense of complex, information-rich situations requiring operations of selectivity and organization that become taken-for-granted assumptional structures (Schon & Rein, 1994); defining the context within which an occurrence falls (Williams, 1982; Tuchman, 1978); a set of social assumptions found in the text (Hackett, 1984); and locating an event in a larger context, or placing an event within a familiar category of events (Hertog & McLeod, 1995). All these definitions have in common a sense of simplification and organization to enhance audience understanding *and* placement of communication within contexts. But in any simplification and organizational process, reduction occurs, which eliminates potential points of views as well as leaving open the possibility of obfuscation, distortion, and deception through omission of material. Lack of context also leads to confusion and potential deception.

The definition of framing used in this study is the selection and salience of symbols by individuals, groups and institutions which typify or embody a central organizing idea of a message.

The Framing Contexts Model

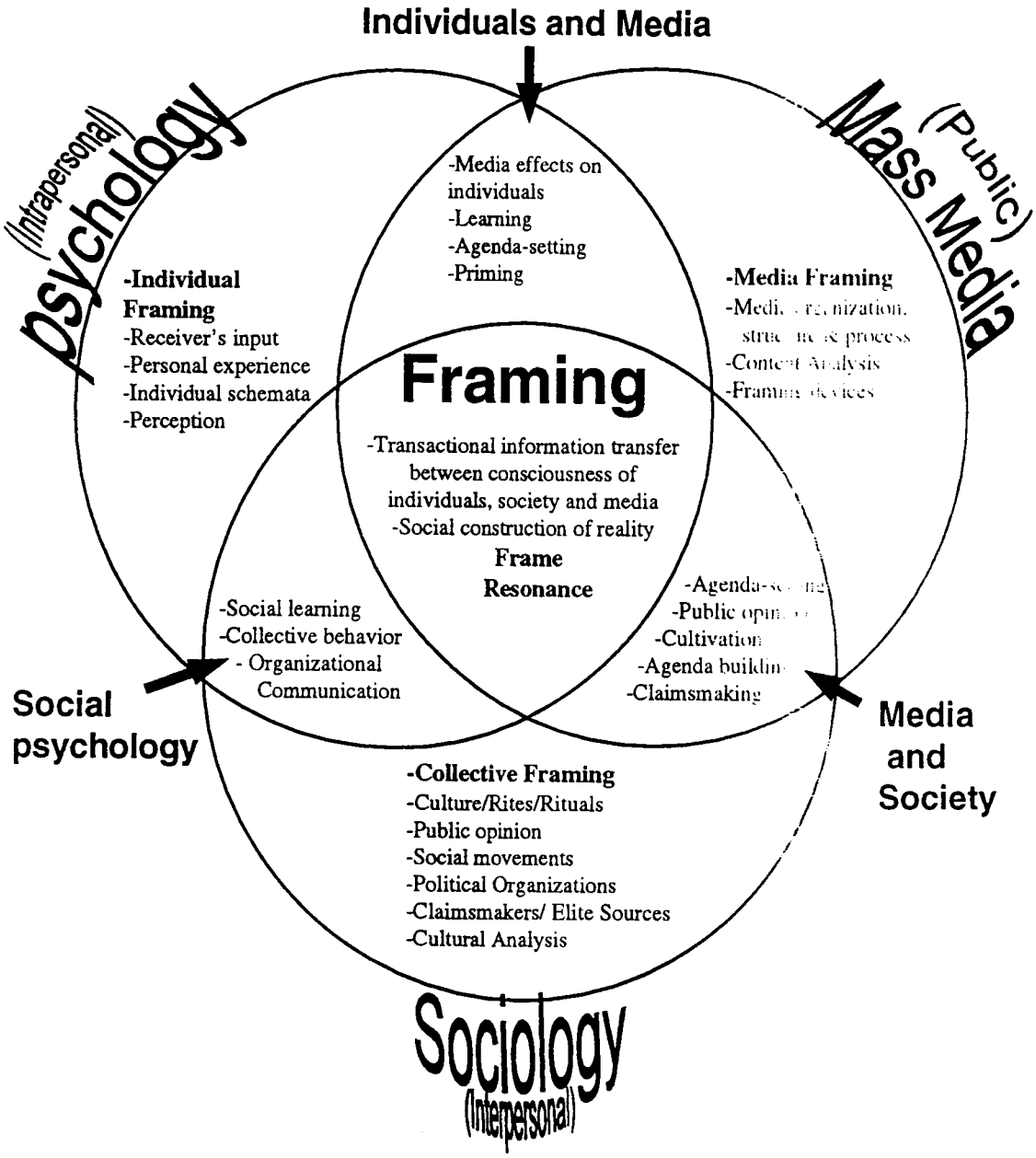
The proposed model is a composite, adaptation, and modification of descriptions and models previously proposed by framing theorists. Most of these scholars use triangulation of several elements to describe the location, creation, and influence of frames, based loosely on the basic categorizations of intrapersonal, interpersonal, and public or mass communication. The model is proposed to identify how this research relates to other framing research. It is described and the related research is presented when the different portions of the model are discussed.

The model is comprised of three main areas with four other overlapping sections which describe potential locations for and types of framing (see Figure 2-1). The three primary areas are psychology, sociology, and social institutions, in this case, mass media. The overlapping areas include: the merging of psychology and mass media titled: individuals and media, the merging of psychology and sociology titled social-psychology and the merging of mass media and sociology titled media and society. Where the three primary areas overlap in the center is titled "framing". This is where reciprocal effects from each primary and overlapping area constitute framing. Based on this model, Entman's definition

of framing still applies, but now with a clarified understanding of the "context" he mentioned.

To develop this model, some ideas were developed from Gamson (1992) where he attempted to analyze the framing process by which people organize for collective political action. He was interested in the interactive process of constructing meaning and recognized the media to be a critical component. Through in-depth interviews and qualitative content analysis Gamson examined how individuals derive meaning from media discourse. He noted that journalists themselves contribute frames and social groups exert pressure to define issues on society. This interaction between individuals, social groups, and the media result in the negotiated meaning within which reality is constructed. It is a merging of personal experience, culture and media influence.

Gamson used the term "resonance" to describe ideas, language and themes that appear natural and familiar across the three areas. Resonance increases the integration of ideas. As information appears closer to home, it is more easily believed and adopted. He proposed a model of how people use a combination of personal knowledge or experiential knowledge, culture and the media. Individuals with less direct experience with an issue are more reliant upon media and culture to achieve understanding.



A composite and adaptation from Gamson (1992), Neuman, Just and Crigler (1992). Gamson and Modigliani (1989) and Entman (1993).

Figure 2-1. The Framing Contexts Model: Mapping the Relationships of Framing Research

Neuman, Just and Crigler (1992) proposed a constructionist model of political communication involving an active, interpreting audience with a focus on the interaction between the audience member and the media rather than a one-way effect on the audience. Their model was a triad of interaction between an individual, a medium, and an issue. That interaction allows for the variation of the medium's character and content and it is sensitive to differences in individuals and media (Neuman, et al., 1992). They defined framing as the subtle interaction between what "mass media convey and how people come to understand the world beyond their immediate life space" (p. xv).

Gamson and Modigliani (1989) suggested three elements merge to create frames: cultural resonances, sponsors, and media practices. Their model did not include the essential active individual receiver. Entman (1993) said frames occur in the receiver, sender, culture and text. For the purposes of this paper, text is difficult to totally isolate from the sender and consequently will be included in any discussion on the sender. Based on Entman and Pan and Kosicki (1993), who suggested media framing involves continual interaction between sources, journalists and audience members, King (1994) stated that the players in the framing process are the source, the media and the audience. By adapting Gamson, Gamson and Modigliani, Neuman, et al., Entman and King, it is apparent the concept of overlapping areas of psychology, sociology and media analysis can have heuristic qualities resulting in productive research. The model also provides the necessary clarifications and distinctions between fields of study.

The Primary Areas: Individuals, Society and Media

The proposed "Framing Contexts Model" helps develop, identify and isolate the concepts within framing contexts, starting with three basic areas, levels, or locations involving the individual, society, and the social institution of the mass media.

Individual-Psychological Level

In the intrapersonal-psychological primary area, research into individual differences in experience, perception and learning are critical. Framing's roots are also found on the individual, psychological level where framing theory builds on Bateson (1972) who suggested that there can be individualized metacommunication or "communication about communication" (Rogers, 1995). Based on earlier models of communication process elements (Shannon & Weaver, 1949) involving source, message, transmitter, signal, noise, received signal and receiver, it was believed that altering any of the elements in the communication process could alter the individual's encoding and decoding of a particular message. Because of individual differences, there seem "to be as many interpretations of a message as there are perceivers" (Bryant & Zillmann, 1994, p. 140). Individual framing research addresses the basic concepts of selective perception including selective exposure, attention, and retention. What individuals learn is often based on what messages they are sending to themselves. These intrapersonal messages frame all their communication. With all these individual differences there may be too many variables to examine interactions and their effects between individuals and media. In the context of framing there are, however,

many shared meanings and consistent ways in which individuals interpret messages and those are the areas of interest in media framing research.

This audience research concerning framing suggests that alternative ways of sending the "same" message, such as a slight change in wording, can affect each individual's interpretation of the message. Kahneman and Tversky (1984) conducted experiments which demonstrate that framing determines what most people notice, how they understand and remember a problem, as well as how they evaluate it and choose to act upon it. They offered a sample of individuals' written options to a problem. The options had identical results or solutions to the problem but were worded in different ways. They found that different emphases in text affected individuals' responses. Entman (1993) said the frames that guide the receivers' thinking and conclusions may or may not reflect the frames in the text and the framing intention of the communicator.

Graber (1988) expanded on the psychological approach, based on schema theory, where individuals form simplified, categorized versions of reality in order to deal with the overwhelming amount of information and messages available. People are "cognitive misers" who form simplified mental models based on the individual's prior experiences. These simplified mental models or schemata perform four functions: (a) they determine which information will be noticed, processed and stored; (b) they help individuals organize and evaluate new information so that it can be fitted into their established perceptions; (c) they help people go beyond immediate information and fill in the missing information; and (d)

schemata help people solve problems because they contain information about likely scenarios and ways to cope with them (p. 29).

Using personalized schemata, individuals vary in the basic perception of public policy preferences and responses to stimuli in the surroundings and they vary in basic belief and value systems that influence decision-making processes in areas such as concern for environmental and health issues (Vaughan & Seifert, 1992) and risk factors (Hornig, 1992).

Sociological Level

On the sociological level, interpersonal communication occurs as individuals collect themselves together for a variety of task-related and social purposes. In this area, framing research can be found in the areas of social movements and collective framing (Tarrow, 1994), organizational communication, and the building of organizational culture and climate. A specific culture and climate is built by one group distinguishing itself from another by its values, rites and rituals, practices, vocabulary, metaphors and stories (Pace & Faules, 1989). Culture is the stock of commonly invoked frames or the discourse and thinking of most people in a social group (Entman, 1993), and cultural analysis examines symbols and people in interactions (Pace & Faules, 1989). Social organizations will emphasize those issues that reinforce the moral, political, or religious order that holds the group together (Rayner, 1992). Just as the individual frames issues within his or her established schemata, social groups frame issues within their established criteria.

Framing presents "cultural resonances" that make specific issues more appealing and familiar (Gamson, 1989; Gamson and Modigliani, 1989). Framing has guided the study of many different social issues, including framing in social movements (e.g. Benford, 1993; Gitlin, 1980), drug usage in society (Fan, 1994), politics (Gamson, 1993), the environment (Prisco, 1995; Jacobson, 1991), and war (Griffin & Lee, 1995; Reese & Buckalew, 1995). These are all social framing issues as humans interact within and between groups.

The framing process occurs in social groups as "social movements are deeply involved in the work of naming grievances, connecting them to other grievances and constructing larger frames of meaning that will resonate with a population's cultural predisposition and communicate a uniform message to powerholders and others" (Snow & Benford, 1992, p. 136). In order to mobilize people, familiar and enticing symbols must be found that encourage consensus and action. Framing and reasoning techniques within a social group change over time as they resonate with larger cultural themes that prevail throughout society (Gamson, 1992). But social movements exist within the broader culture and with outside pressures. They may attempt to use the external resources of the media to try to mobilize a following, but "against the inherent power of the media to shape perceptions, movements possess little cultural power" (Tarrow, 1994, p. 23). When combined with the media influence, as discussed below under media and society, social movement organizations can have significant influence over other groups and individuals.

The power of social movement organizations exists in their ability to create a reality and establish a collective identity for their supporters through collective framing techniques.

Some research has examined frame disputes among factions within certain movements (Cable, Walsh & Warland, 1988; Ladd, Hood & Van Liere, 1983). Benford (1993) examined organizations within the nuclear disarmament movement and found two organizational contexts for frame disputes: members of a single organization disputing the framing activity and inter-organizational conflict between the most moderate and most radical organizations in the movement. These frame disputes centered around three areas: diagnostic frame disputes involving problem identification or attribution of blame; prognostic frame disputes concerning disparate views of reality and disparate proposed solutions; and frame resonance disputes on determining how reality should be presented so as to maximize mobilization.

Mass Media - At the Social Institution Level

The cognitive psychology and collective framing concepts are easily projected into the level of a social institution and the public communication context. The media conduct similar framing functions of categorization and simplification in attempts to transfer information from themselves to individuals and society. The media determine which information will be presented or in the case of news, what is covered and how much importance is placed on the event. Shoemaker and Reese (1991) state that media content is shaped by the idiosyncrasies of a particular medium, those who work in the media, and the environment in which the media exist. That environment includes influence from social pressures such as claimsmakers who have an interest in defining and portraying an issue

according to their best interests. This involves interaction with another section of the "Contexts Model" which will be described below.

Even as the media have these external pressures, they attempt to organize information in ways they think will be best understood by their audiences. They provide information, suggest possible solutions, and assume audience members will fill in any background or missing information from existing schemata or other sources. Beniger (1987) adds, however, that a new paradigm of media studies must extend research beyond cognitive psychology and social psychology to include political information processing, macroscociology, and much traditional humanities subject matter. Media framing refers to the simplification and reduction of messages to make them more identifiable and understandable, which may enhance some levels of audience cognition, but may limit and purposely bias possible definitions and the scope of the debate on a particular issue (Gitlin, 1980).

Under the "Framing Contexts Model," the institution of interest, whether it be a media, political, business, industry, or social movement entity can be isolated and examined in light of its framing effects and influence on individuals and society.

Media framing, while considered a relatively new theoretic approach (Beniger, 1987), is an accepted method of media analysis (e.g. Entman, 1993; Gamson, 1993; Iyengar, 1993). Media framing posits that the news media simplify and categorize issues in ways that make them more identifiable. "Media frames are persistent patterns of cognition, interpretation, and presentation of selection emphasis and exclusion, by which symbol-

handlers routinely organize discourse, whether verbal or visual" (Gitlin, 1980, p. 7). This does not mean that framing is always a positive influence on journalistic accuracy and objectivity. On the contrary, it means that some aspects of accuracy and objectivity are sacrificed in order to simplify and categorize news items. The process of gathering and producing news distorts reality to a certain extent (Altheide, 1976; Efron, 1971). Framing helps to explain this process. Tilly (quoted in Beniger, 1987) said recent innovative research in mass media issues deals with framing and reframing of public issues as both a product of and a limit on debate and decision making. In order to examine media framing, Gamson (1989) suggested there are three determinants of how and why frames ebb and flow: cultural resonances, sponsor enterprise, and media organization, process and practice. The chronology of media framing studies generally finds earlier studies focused on news processes which identified how news was gathered and how the practice of news gathering and the organization and the structure of the news business all influenced framing (e.g. Hartley, 1982; Gitlin, 1980; Gans, 1979; Tuchman, 1978, Bailey, 1976; Epstein, 1973).

Media framing suggests that the media present packages that "organize the world both for journalists who report it and, in some important degree, for we who rely on their reports" (Gitlin, 1980, p. 7). Framing is a form of social construction which media transmit to their audiences. It includes the media's "selection and salience" of important catchwords, phrases, symbols, and pictures used in the process of defining as issue (Entman, 1983). These issue definitions by the media help individuals and society to structure their issue definitions.

The suggested results of framing are that the media are in a stronger agenda-setting position (Iyengar & Kinder, 1989), because the media will not be "passive 'gatekeepers'... so much as active 'shapers' or 'framers' of public opinion" (Beniger, 1987, p. S54). Not only do the media tell us which issues are important, but the focus of issue coverage helps audiences to know what is important about a particular issue. As a possible extension of agenda-setting, framing says the media do tell people what to *think.* What the coverage included and what it did not include contributes significantly to audience members understanding of the issue and their thinking about the issue. The reasons for framing and the process of framing, which involves many players and techniques, have traditionally been challenging to isolate and quantify.

Some early mass media studies, though not then considered framing research, are widely cited in the current framing literature. They examined the news process and tended to use qualitative, participant observer or direct observation of media organizations to understand the news media framing process. Tuchman (1978) said that news is a window to the world and through its frame, audiences learn about the world around them. Epstein (1973), a political scientist, studied how the internal television networks organizational factors influenced story selection and coverage. Gans (1979), a sociologist, studied the *CBS Evening News*, *Newsweek* and *Time* through qualitative examination and limited content analysis in an attempt to identify "what's news." In the process, he found institution organizational processes as well as outside pressures and news values at work molding and shaping story selection and the eventual portrayal of issues. As a deviation from traditional

agenda-setting studies, he examined how and why particular aspects of each issue became salient. Values such as ethnocentrism, altruistic democracy, and responsible capitalism, as well as other values helped define news and helped in "deciding what's news."

These news process studies provided a great deal of information about journalistic norms, organizational news routines, production costs, political sensitivities and other factors (Gamson, 1989). Manipulation of any of the elements in news media production, transmission, and reception can influence message interpretation. A better understanding of framing as a credible theory could be an essential link to the understanding of the power and effect of the news media. The news media in general and particularly television news "is an ideological medium, providing not just information or entertainment, but 'packages for consciousness'--frameworks for interpreting and cues for reacting to social and political reality" (Hallin, 1986, p. 13).

Media content analysis is used to measure the amount of exposure, the placement in a specific medium, the tone of presentation, the accompanying headlines, visual effects, labeling and vocabulary (Parenti, 1986). Content analysis is the method often used as a basis for determining patterns and themes which determine the frames presented or the organized way of thinking about an issue. Gamson (1989) assumed the information content of news facts had no intrinsic meaning but was organized, given coherence and took on meaning by being embedded in a frame or story line. Deviating from the traditional content analysis of only looking at manifest content, he said a frame analysis will "call attention to the omissions as well as the inclusions" (p. 158).

The Overlapping Areas: Individuals/media, Social psychology and Media/society

The overlapping areas are where effects and interactions between segments of society can be examined. The influence of interest to researchers in these areas address how individuals and media affect each other, how social institutions interact with individuals, and how media affect and interact with society.

Individuals and Media

A wide variety of research has examined the influence of the mass media on individuals. These have ranged from violence and aggression studies (e.g. Gerbner & Gross, 1976) and learning from television (e.g. Graber, 1990) to political indoctrination (e.g. Parenti, 1986) which incorporate framing concepts by examining the perceptions of individual. Evidence suggests that the media are able to direct attention to certain issues and shape opinions about them. Agenda-setting (e.g. Rogers & Dearing, 1988; McCombs & Shaw, 1972) has been used to describe the media's ability to impact the importance of issues. A similar, yet more temporary effect, is called priming and refers to the ability of media to affect the individual's criteria for judgment (Iyengar & Simon, 1993). When placed in certain situations, people think about "what comes to mind" (Iyengar and Kinder, 1987, p 65). Quite often, while that judgment occurs on an individual level, it is based on recent experience with media.

Audiences use schemata in combination with the "package" of words and symbols presented by the media to make sense of the world (Gamson & Modigliani, 1989). This is the process of constructing reality as the subtle interaction between what the mass media convey and how people come to understand the world beyond their immediate experiences (Neuman, Just & Crigler, 1992).

Graber (1989) said, "When journalists choose content and frame it, they are constructing reality for their audiences, particularly when the story concerns unfamiliar matters and there is no easy way to test its accuracy" (p. 147)

Neuman, et al. (1992) compared media frames and audience frames. Through a comparison of dominant media themes and individual in-depth interviews, they found the media focus much more on conflict that do individuals and individuals tend to value human impact and morals more than the media. In another study comparing the relationship between individuals' framing techniques and the media's, Iyengar (1991) found individuals were more interested in general themes and not the episodic or recent event themes emphasized by the news media.

An example of framing research which focuses on individuals differences is in Iorio and Huxman (1996), who qualitatively examined what people thought about the media coverage of the Gulf War through in-depth, focused interviews with 191 people. When respondents were asked about their concerns, the researchers found people participate in a three-part framing process: linking, which involves organizing experiences by connecting and interrelating various concerns; collapsing, which involves merging information,

condensing and eliminating details; and coloring, which is the interpretation of events and personalities from a personal standpoint.

Social psychology

Social psychology research focuses on the reciprocal influence of the individual and the group within which the individual interacts. A significant amount of research has been developed on social movements and collective behavior, or the way individuals act when in a group, which may be different from how individuals act alone. Past research has focused on circular reaction, collective reaction, social contagion, and distinctions between crowds, masses and public opinion (Blumer, 1969). Other lines of research examine "emergent norms" (Turner & Killian, 1987), which are expected behaviors which develop as the group identity develops. Participation in collective behavior is a "mix of individual and collective behaviors" (McPhail & Wohlstein, 1983). Based on the contexts identified in the model, this mixture of group and individual thinking can occur without the mass media.

Collective action frames are "action oriented sets of beliefs and meaning that inspire and legitimate social movement activities and campaigns. They offer ways of understanding that imply the need for and desirability of some form of action" (Gamson, 1992, p. 7 quoting Snow and Benford, 1992). Collective frames can examine themes such as injustice, which is moral indignation, or agency, which is the consciousness that it is possible to alter conditions and identity. Collective frames often emphasize the definition of "we" typically in opposition to "they" who have different interests or values (Gamson, 1992, p. 7).

Another area of framing involves social learning where individuals negotiate meaning with group interaction resulting in a type of learning distinct from that capable by the individual alone. There is realization of the "limitations and conditions of one's own knowledge and an appreciation of the legitimacy of other sources of knowledge...carried by social actors" (Wynne, 1992).

Media and society

This is the site where "various social groups, institutions and ideologies struggle over the definitions of social reality" (Gamson, 1992, p. 25, quoting Gurevitch and Levy, 1985). Research in this area has focused on agenda-setting, agenda-building, public opinion, cultivation, and social movement interaction with media.

Agenda-setting identifies the media's ability to influence the public to think about issues which the media emphasize. This voluminous area of research has identified factors affecting agenda-setting potency such as obtrusiveness of the issue, the type of issue, media type, and time lag between media exposure and opinion development. But questions arise about where the media get their ideas.

Agenda building is the term used to describe society's or a sponsor's influence over the media's agenda. Most media frames have sponsors from social groups who are interested in promoting a particular definition or view of an issue. These sponsors are usually organizations employing professional media and public relations specialists who know and understand the needs of journalists (Snow & Benford, 1988). Indeed, training

materials and seminars are available for public relations practitioners attempting to influence media coverage. One manual examines how information sources and interviewees can "shape the story so that the media accord it the amount of coverage and the sort of coverage the source considers appropriate" (Sandman, Sachsman, & Greenberg, 1992).

Gamson and Modigliani (1989) provide an excellent description of the interaction between highly influential government, business, social movement entities and the media. They suggest sponsors are skilled in helping media develop their frames. "These sponsors are usually organizations, employing professional specialists whose daily jobs breed sophistication about the news needs of the media and the norms and habits of working journalists.... Smart sources are well aware of the journalist's fancy for the apt catchphrase and provide suitable ones to suggest the frame they want" (pp. 6-7).

Studies examining cultural resonances or social conditions where researchers looked at how the media shaped or reflected salient societal issues are an area of framing research (e.g. Gamson, 1992; Jacobson, 1991; Iyengar, 1991; Gamson & Modigliani, 1989; Best, 1989; Iyengar & Kinder, 1987;).

As part of society's influence over the media's agenda, the concept of claimsmakers and stakeholders who influence media coverage and policy development is important. The media are recipients of framing messages. Media do not exist alone; they are supported by and dependent on sources of information. Studies examining claimsmakers or stakeholders who advocate particular media frames contribute a significant amount of research to the

framing area (e.g. Riechert, 1996; Anderson, 1995; Cottle, 1995; Benford, 1993; Best, 1990).

The model allows for the identification of claimsmakers who are elite sources critical to the interactive framing process. In the attempt to appear objective and appeal to as broad an audience as possible, journalists use interviewees to help tell the story.

> The easiest way to accomplish this (objectivity and openness) is for the journalist to station little or nothing on his own authority but instead to referee the statements of others. Since there are too many voices for all to be included, journalistic convention establishes a hierarchy of spokesmanship and documentary evidence (Dorfman, 1984, p.28).

Journalistic tenets require the use of quotes or sound bites from individuals representing selective voices in a debate on a particular issue. This process involves "learning from other people's experiences, a kind of vicarious evocation of emotions" (Roeh, 1989, p. 166). News stories, thus, are fictions, not really false, but constructions based on actor-oriented interpretation (Geertz, 1974, cited in Roeh, 1989). News sources and news makers shape the news by providing a context for their utterances and they produce meaning through their "storytelling" (Roeh, 1989).

Some claim the news media are only accessible to "those in powerful and privileged institutional positions who are thereby able to define social reality" (Cottle, 1993, p. 111). Entman and Rojecki (1993) found the Reagan administration position against a nuclear freeze to be over-represented in news coverage while nuclear freeze advocates were trivialized. Entman (1991) examined coverage of the KAL and Iran Air incidents where

airliners were accidentally shot down. He identified the news frame that coincided closely with the administration's interests.

The media can be secondary claimsmakers as they reflect, ignore, promote, dismiss, combine, and legitimize advocated frames (Best, 1990). As social movement and public opinion form in response to directly observed problems and also to mediated problems, media coverage helps social movements maintain support by bolstering the status of their members and communicating their activities to members (Tarrow, 1994; Molotch, 1979). Neuzil and Kovarik (1996) state "legitimacy is granted and denied by the mass media--one person's terrorist is another's freedom fighter" (p. xix). The media can also construct or create their own frames, which the public uses to construct its reality.

Collective frames interacting with media coverage help to legitimize or trivialize social movements (Parenti, 1986). Gitlin (1980) qualitatively studied news coverage of Students for a Democratic Society (SDS) during the public protests about the United State's involvement in the Vietnam War in the 1960s. He concluded that the news coverage disparaged the group's effectiveness through various framing techniques such as trivializing their activities, emphasizing internal dissension, and relying on statements of more credible government officials.

"Mass media define the public significance of movement events, or, by leaving them out, actively deprive them of larger significance.... The forms of coverage develop into systematic framing, and this framing, much amplified, helps determine the movement's fate (Gitlin, 1980, p. 3).

Claimsmakers as Framers

One important aspect of framing under Pan and Kosicki's (1993) structural syntax category and Gamson and Lasch's (1983) use of stereotyping is the journalist's selection and use of the news sources and interviews in stories. Gitlin (1980) also found social movement groups to be marginalized and discounted depending upon how the news sources were portrayed. In many instances, the official government position is the commanding influence in news coverage. In a study of public relations influence on news coverage, Sachsman (1976) found that over half of the environmental news items in the San Francisco area media originated with public relations professionals and over a quarter were direct rewrites from news releases. The government supplied the greatest number of news releases and were most often the basis for stories.

On the other hand, there are complaints that in the environmental debate, environmental organizations have commanded an unfair share of influence over media coverage (Graham, 1989; Cottle, 1994). Complaints surface concerning both the growth of the environmental lobby and excessive power exercised by business groups (summarized in Anderson, 1995). Environmentalists claim that because of the political economy model, which promotes business development and growth, and is espoused by most social institutions in the United States, the media reinforce and support development and industrial growth through their coverage (Cable & Cable, 1995, Cantrill, 1991). Thus, while framing intends to simplify messages and aid in issue comprehension, influential competing sources

with competing frames can result in limiting debate and reduce source credibility by consistently portraying sources in certain ways.

Claimsmaking is a critical component to framing because conflicts are implicit in policy discussion and implementation. Graber (1988) says that examining the communication and perception patterns of known groups is a good way to begin to predict how they are likely to handle new information. Schon and Rein (1994) use "naming and framing" to describe framing. They said that framing involves two or more parties contending with one another over the definition of a problematic policy situation, and attempting to control the policy-making process. The struggle over the "naming and framing" of a policy situation is a symbolic contest over the social meaning of an issue domain, "where meaning implies not only what is at issue, but what is to be done" (p. 29). Schon and Rein state that frames are often presented in terms of "normative dualism" as two opposing groups suggest which direction policy should move. Their examples show inherent metaphor dichotomies such as health/disease, nature/artificial, wholeness/fragmentation, indicating in which direction policy should move. Often the claimsmakers or media actors who promote frames are in direct contention with one another as frames are mutually incompatible.

These frames are the persistent patterns of cognition and presentation that lead to certain interpretations (Gitlin, 1980). Those with media access have a significant influence on these media frames. Frames are established during the process of who is selected and

ultimately appears as an interview for a news story. Cottle (1994) suggests that interview sources can control the message.

> Who gets on often determines 'what gets said.' In addition to the array of substantive environmental concerns finding expression across the news medium, then, attention is also paid to the environmental actors finding a public stage from which to advance their concerns and points of view (p. 112).

The claims made by interviewees are important in how much interest is maintained regarding the issue.

Elite Control of Media

Capitalist values are propagated through socialization processes in institutions such as the media. In the environmental debate, the media's tendency to rely on government and industrial sources of information rather than environmental groups has skewed reporting to generally support technological solutions (Cable and Cable, 1995). Although the environmental movement has relied on the media to advance its cause, actual coverage has reflected the accepted symbolic universe of the increased development and trust in technology rather than limiting growth (known as Dominant Social Paradigm or DSP) and preservation of environmental resources (known as New Environmental Paradigm or NEP) (Cantrill, 1992). Government and industry sources are dominant contributors to news information (Singer and Endreny, 1993) although some evidence of increased use of environmentalists as news sources has been found (Smith, 1995).

Part of the reason government sources dominate environmental news is because the environment is a political issue, therefore, solutions must come from government (Prisco, 1995; McCormick, 1991). As the media include spokespersons and responses from various government, industry and advocacy groups, the media become secondary claimsmakers as they legitimize and publicize their points of view (Best, 1990). Even though government sources are most often used in news reports, the professional news broadcasters are by far the most dominant voices heard on television. Anchors and reporters advance the narrative and all voices are subordinate to these broadcasters' privileged voices or opinions. Whatever an individual interviewee may say, the meaning is determined by how the anchor or reporter introduces or concludes those remarks (Hartley, 1982).

The metaphor of the prism (Lichter, 1996) is appropriate to media framing. A prism selects certain visible wave lengths and makes them more evident and dominant by isolating them. The news media has many options concerning how to cover news, but only a few topics are selected, and of those selected, certain aspects are prominently presented resulting in dominant frames. The way those aspects of an argument are highlighted is through the use of framing devices.

Framing Devices

Framing devices are the vehicles that carry meaning in frames.

> Television news, we can all agree, is something other than purely fictional narrative. It contains messages that bear some relationship to the world of events and that purport to be factual. At the same time, it is selective, incomplete, fragmentary, and reliant on a set of organizational values,

> narrative forms, and presentational conventions that shapes our understanding of that world (Barkin, 1989, p. 154).

These narrative forms and presentational conventions can be categorized as framing devices. Pan and Kosicki (1993) identify four relatively abstract devices that can create an overall frame: syntactical structure, script structure, thematic structure, and rhetorical structure.

Syntactical structure refers to the arrangement of words and phrases in an orderly system or to the sequential elements of a story, including the sequential elements of the story and the strategy of using "expert" source attribution (Liebler & Bendix, 1996). These arrangements may be dictated by cultural norms and in the case of media framing, journalistic norms. There are certain accepted and "proven" methods of news story presentation (Tuchman, 1978; Gans, 1979, Hartley, 1982). Script structure describes the story organization in a narrative form including introduction, conflict, resolution, and conclusion, where thematic structure simply refers to the central theme presented in a story. Journalistic practice routinely categorizes stories by theme. Under the "beat" system of where reporters cover specific areas such as business, health, government and environment, this type of categorization may be routine. Rhetorical devices are symbols and images which purportedly suggest the factual nature of the news story, contributing to the overall frame (Pan & Kosicki, 1993).

More concrete devices are identified by Gamson and Lasch (1983). They are keywords, catchphrases, visuals, metaphors, stereotyping and symbols. Framing devices are the vehicles by which frames become apparent in media discourse.

The use of these devices explains the issue of salience discussed by Entman (1993). Through placement, repetition and association of these devices, which results in the salience of certain aspects of the story, an issue frame can be achieved and established. "The essence of framing is sizing--magnifying or shrinking elements of depicted reality to make them more or less salient" (Entman, 1991, p. 9).

Salience is a critical concept in framing. Salience refers to emphasizing or making concepts more important and evident. Television new uses certain techniques to focus attention an emphasize importance, including the length of time a concept is shown and discussed. Importance is also indicated by whether it is the lead story or near the beginning of the newscast.

The next section describes the characteristics of television news and indicates the importance of certain framing devices unique to television news.

Media Framing and Endangered Species Issues

Studies concentrating on environmental issues find the major claimsmaker used in the stories is the "government" or "official" spokesperson (Graber, 1988; Singer & Endreny, 1993; Liebler & Bendix, 1996). Even in the early days of the modern environmental movement when oil spilled in Santa Barbara, California in 1969, federal

sources and business spokespersons had greater access to new media than conservationists and local officials (Molotch & Lester, 1980). The accessibility to these spokespersons and their direct involvement in regulating environmental issues may lead to the usage of government spokespersons for interviews. While "officials" are a majority of the interviews, there is also a tendency by the media to emphasize the pro-development "side" on competing issues. Liebler and Bendix (1996) studied a sub-issue of the endangered species issue by examining the controversy of old-growth forests and timber industry on network newscasts over a four-year period starting in April 1989. They found the language as a whole and specific reporter's concluding statements were pro-development or in favor of the timber industry cutting the trees. The "favored frame was usually procut" (p. 62). They suggested there was not a "bias," but rather the pro-development side was more easily encapsulated into the news stories.

In a study of a television news documentary on the environmentalist group Earthfirst! who was staging protests against timber cutting, Schlechtweg (1996) found the group to be portrayed in a negative light and the timber people to be responsible and victimized. Several other researcher have claimed that because the media are a social institution they contribute to the "political economy" which emphasizes pro-development.

Other researchers have used computer analysis to isolate specific words attributed to specific claimsmakers. Riechert (1996) examined news releases from conservation and property-owner advocacy groups such as the National Audubon Society and the American Farm Bureau Federation and found significant differences in specified frame terms between

the two news releases from the two types of "stakeholders." She used the titles "conservation" and "property-owner" to distinguish the two frames. For use in this study, the property-owner designation was considered synonymous with pro-development.

In a similar study, which was a pilot for this study, the author sampled specialty publications or magazines from conservation groups and business-related groups such as *Sierra* and *National Forester* respectively and also found distinct usage of specific terms by the different claimsmakers (Smith, 1995b). The two sets of terms from both studies appear qualitatively different from each other depending on the originating claimsmakers.

The Characteristics of Television News

Examining the characteristics of television news identifies idiosyncrasies associated with TV news and news values (e.g. Iyengar & Kinder, 1987; Hartley, 1982; Gans, 1979). Idiosyncrasies are those factors that shape the nature of television news and make it unique from other mass media news. News values refer to those factors that influence how and whether stories are covered or not. Specific characteristics of television that can contribute to the construction of meaning in peoples lives will be addressed, and another segment will address content analysis of television programming. Traditional content analysis focuses on text analysis, an important part of this study, but analysis of visual and audible content presents specific challenges. Various techniques have been employed to analyze news content. Examples range from overall impressions derived from all the audible and visual cues to measurement of distinct individual parts of a news story.

It has been suggested in the previous chapter that television news is the main source for the public's news and information (Hueber, 1991; Roper, 1988). However, there is skepticism of this claim due to faulty measurements and the lack of viewer attention and interaction with television at viewing time (Robinson & Levy, 1986; Lichty, 1982). If a news story does not fit viewer interest or is not within previous knowledge, little learning may occur. Situational factors also exist, such as if people are simultaneously participating in other activities such as preparing dinner or reading the newspaper. In these instances, little learning occurs from television news.

Television News Values

The discussion of the character of television news must identifying idiosyncrasies associated with TV news' interpretations of news values. News values refer to those factors that influence whether stories are covered, and how, such as timeliness, proximity, prominence, conflict, consequence, rarity, novelty, sensationalism, human interest, and others (e .g. Mencher, 1996). Television news has been criticized for sensationalizing news by exploiting graphic video images (Wilkinson & Fletcher, 1995; Steele, 1987). Television news also contains visual bias or the unequal visual treatment of those involved with political campaigns and debates (e.g. Tiemans, 1978; Tiemans, 1970), racial issues (e.g. Entman, 1990; Dykes, 1982), and gender issues (e.g. Ferguson, 1990). By timing and counting each shot, these studies have shown that a disproportionate number of shots and total time of shots has been devoted to a particular "side." This relates directly to framing

because framing seeks to identify the commonly used and repeated images. The above studies have documented the dominant images in certain news coverage.

Sometimes pictures are edited in ways that present pictures in rapid succession, which may influence viewer perception of the issues presented. Viewers' and critics' complaints often stress excessive speech or picture rates. Pictures which are emotionally arousing or visually irrelevant to the text, while attracting attention to the television screen, may not contribute to an understanding of the issue (Berry, 1983). Again, framing suggests that when ideas, words, and images result in frame resonance, the message has more potential impact. A line of research examining this visual and verbal redundancy suggest an identical conclusion. Most of these studies utilize content analysis by noting the number of appearances and timing the occurrences.

This study focuses on television news, but it is important to understand that the various media affect and influence one another. Not only can television coverage frame issues for its viewing audience, television can influence other media such as newspaper, newsmagazines, and radio. Agenda-setting studies show that print media have a powerful influence on what news is covered by other media, but there is also evidence to suggest the *way* a story is covered by other media can be influenced by television coverage (Smith, 1994). Television networks' influence on framing is also a function of their ability to color the way issues are presented in other media. The networks may establish precedent in the way other print and broadcast journalists approach the same story (Reese, et al. 1994). The

micro-analysis of the words and pictures presented in television news may provide clues toward an explanation of the ideas and methods of covering news.

Message Contribution from Words in Television Narration and Interviews

It is widely accepted that words can provide powerful "images" and must be studied. Now that the television age is here, evidence suggests, ironically, that audiences often pay more attention to the verbal text than they do to the visuals (Drew & Cadwell, 1985). In broadcast news research, the text is studied because the reporter narration "sets the agenda for the film used in report" (Gans, 1979, p. 158). In addition to reporter narration, anchor leads must be analyzed because they are the "hook" designed to attract audience attention. These leads usually establish a frame early on by stating a highlight or raising a moral issue, or they question a common expectation or stereotype (Gans, 1979). The words spoken during the interview segments by claimsmakers are important as well because the interviewees compete for credibility and the framing of the story (Best, 1989). Text analysis looks for catchphrases and repeated word usage (Entman, 1993).

Research which closely examines television news text is somewhat rare and difficult because of the time and resources required to obtain broadcast transcriptions, so most textual analysis concerns the print media, although another challenging area of research concerns the visuals on television news.

Framing and Television Visuals

While some research has shown the importance of television verbal message, psychological experiments support the claim that under free recall, pictures are superior to word forms. The explanation is that pictures evoke both verbal and figural encoding, but words evoke only verbal encoding (summarized in Joseph & Joseph, 1980). However, research continues to find inconsistencies in the contributions of visual and verbal messages in television programs.

Gunter (1980) found that while television pictures were recalled better than verbal only messages, pictures inhibited learning on non-pictorial items. Lester (1995) suggested that the most powerful, meaningful and culturally important messages are those that combine words and pictures equally and respectfully (p. ix-x). He claimed that before the widespread use of the printing press, pictures may have been more important than any written words. Since Gutenberg and the beginning of mass printing, words have become more important than pictures in conveying complex thought while images were relegated to occasional diagrams. The invention of photography, film, television, and the computer has dramatically changed the role of visual messages in communication and "nowhere on Earth can a person avoid being confronted with some sort of visual message" (Lester, 1995 p. ix).

The research of television pictures assumes pictures are powerful messages. News pictures may have even more impact because of their believability. People have developed a trust in the visual senses, and the trust in moving pictures for news information began with the development of the newsreel.

Television pictures can convey details, illustrations and emotions too complex to capture effectively in news copy alone (Mayeux, 1996). "Pictures make information transmission more realistic, accurate, and touching than is possible in purely verbal messages" (Graber, 1988, p. 173). There is a pervasive assumption, agreed upon by politicians, journalists, and social scientists, that there is a special power inherent in presenting news through pictures (Iyengar & Kinder, 1987). This may be due to the "vividness bias" which suggests people give inferential weight to information in proportion to its vividness or visual qualities (Iyengar & Kinder, 1987) The vividness bias may emphasize less important or trivial matters, ignoring more important issues, but Iyengar and Kinder showed there is no additional agenda-setting effect when news information is presented in more "vivid" terms. Adding a vivid case seems, if anything, to diminish the power of television news to set the public's agenda" (Iyengar & Kinder, 1987, p. 40).

Television news has a compulsion to have pictures with most, if not all, of its stories (Gans, 1979). Often visuals are driven by the text, but just as often text is written to fit the pictures (Epstein, 1973). Pictures seem to give news the appearance of authenticity, "seeming to reproduce reality without filter or comment" (Brosius, 1996, p.180). Audiences feel, through the television news camera, that they are seeing events for themselves with their own eyes. The reason is that pictures provide a closer resemblance to the object or event than a more abstract verbal account, resulting in a less arbitrary perceptual interpretation (Hartley, 1982). Television news will use pertinent, exciting visual footage if it is available, and when exciting film is available, producers try to convince themselves of

the story's importance. Immediacy often requires producers to film dramatic highlights that may be parenthetical to a story's importance. Television journalists defend the use of visuals as a way of attracting and holding the audiences' attention (Gans, 1979); however, there is no set way of seeing pictures because "visual images do not have a fixed meaning" (Gamson & Modigliani, 1989, p. 18), which complicates the attempt to understand how visuals contribute to the framing presented on television news and how individuals learn from television news.

Most researchers do not use the term "framing" when discussing the contribution of visuals to learning from television news. But when one considers how the various components or channels within the message influence, affect or modify each other, then this *is* framing. This is "communication about communication" (Rogers, 1995), or what the visuals say about the verbal message and vise versa. In visual framing analysis, the researcher is interested in the communicative abilities of the components of messages (Grabe, 1996). Symbols in the form of visual images are considered a critical component of television, and television images in the context of cultural context can contribute meaning to a frame (Gamson, 1992). When diffused over an entire nation, television, with its capacity to capture complex situations in brief visual images can help bring about social movements (Tarrow, 1989).

There has been considerable debate and mixed research results over the importance of television visuals to learning. Some researchers say that most of television's pictures are generic and non-essential, simply filling the space between the important pictures and

words, but there are moments when "visual imagery contributes significantly" to story lines (Gamson, 1989, p. 159; Graber, 1993). Others add that unless the pictures carefully correspond to the verbal channel, they hinder retention of information (Brosius, Donsbach & Birk, 1996).

The degree of verbal-picture correspondence or redundancy has been manipulated in experiments to measure recall of message content. However, an additional variable of how these pictures help to frame the stories is often left out of research. Often these images are symbolic in nature, and when they resonate with cultural contexts, can be very powerful (Gamson, 1992, Wilkins, 1992; Gans, 1979). Two general strands of research are found when examining television's visual content and its potential effect concerning media framing. The first includes presentation features such as shot type, stills versus moving pictures, graphics and editing. A second substantial strand of research concerns verbal and visual redundancy within the news story and the influence on learning from television.

Shot Type

The visuals in television are framing devices which have the potential of sending or modifying messages. The potential importance placed on a subject by television by viewers can be attributed to how long and how often the subject is shown on the television screen.

Fictional visual communication media such as movies and dramatic television programs use many distinct shots and creative shot transition techniques in providing

entertainment and persuasive messages, though this variety is not as prevalent in television news. Knight's study (as cited in Grabe, 1996) stated that television news is considered to be one of the most conservative and conventionalized television genres in its use of structural features. Due to time and financial restrictions, television news is marked by less flamboyant applications of structural techniques than films or advertising. Full-body and medium shots tend to be more neutral or "objective" than high or low angle shots and extremely wide or close-up shots (Mamer, 1996). News "shots" can therefore be examined on relatively simple levels including perceived camera to subject distance, camera angle, camera/lens movement and editing (Grabe, 1996).

There are conflicting results concerning the contribution of television visuals to the learning process. Research has found that moving pictures produce better free recall than still ones, and still pictures produce better recall than non-visual presentation (Gunter, 1980, cited in Berry, 1983). However, others have found that the visual channel can exceed the respondent's processing capacity, and it contributes to reduced attention and confusion (Drew and Cadwell, 1985). At the same time, "viewers subjectively seem to consider illustrated news as being more important" (Brosius, 1989, p. 11). Therefore, there are variables within the area of visual presentation that can affect perceived framing.

In a study of German television news, Brosius (1989) identified four areas of interest. First, the effects of the pictures are dependent upon the type of content that falls into two general categories: whether the pictures are of "primary events," such as hard breaking news, or accidental, unexpected events, which are documented through news

pictures and media-oriented; or whether the pictures are "person" events, such as press conferences or debates. He found these categories to be too broad and felt they needed to be re-examinated. Second, because individual recipients have developed cognitive schemata, that is typical or expected scripts for certain news items, the optimal amount of visual information may be different for different types of stories. Third, the breadth and depth of the items may enhance learning. Based on a certain set of news items, "quantity of information can be enlarged either by additional information within the items or by adding more items" (p. 2). Fourth, the contradictory results obtained in "learning" from television news have resulted from the use of different dependent variables and different measures of learning (e.g. recall vs. recognition).

After examining these concepts, he found that people *remembered* stories with pictures better than non-illustrated stories, but that *understanding* was not significantly improved by adding more pictures (italics added). The question is then proposed: Why would television pictures help people remember, but not help them understand? It may relate to the whether the words and pictures support or contradict one another or to the relationship of words and pictures which is discussed later in this study.

Pictorial treatment of subjects has been examined in several studies. A particular area of interest has been the equal treatment or visual bias observed during political coverage or debates. Tiemans (1978) examined visual content of the 1976 presidential debates. He defined a shot as a segment in which the visual structure of the image remained constant. Within each of the 528 shots he examined, he looked for shot length, camera

movement, camera framing and image size, compositional balance, camera angle, and the direction the subject was facing. Based on popular television production textbooks, he determined that camera movement can be used to increase and maintain interest in the subject and that close-ups can intensify the visual image by directing the viewer's attention (Millerson, 1976; Zettl, 1976). He also determined that a shot taken from below made the object or event seem more important and powerful (Mandell & Shaw, 1973; Tiemens, 1970). He found slightly subtle differences that tended to favor Jimmy Carter over Gerald Ford. A slight contradiction to Tiemens resulted when researchers found that viewers don't want their "TV personalities" to be superior or more powerful. They wanted them to have credibility and attractiveness, which comes about by shots at eye level or slightly above eye level (McCain, Chilberg & Wakshlag, 1977).

Close-up shots tend to warm the audience to the subject and increase the emotional impact in most cases. There is a forced relationship between the viewer and subject. The audience is forced to learn more about and get closer emotionally to the subject because the viewer is "closer" to the subject when watching close-up shots. There are examples such as an extreme close-up during an interview where negative emotions (anger, suspense, violence) may be invoked, but most of the time positive emotions between viewer and subject are created during close-ups (Hickman, 1991).

Another study found that objects placed on the left side of the screen resulted in higher viewer retention rates. These results were stated to be consistent with studies concerning asymmetry of the human brain (Metallinos & Tiemens, 1977). Other related

concepts deal with "directional forces" or vectors on the television screen. These vectors are visual cues that lead the eye from one point to another. Zettl (1973) claims these vectors are probably the strongest forces operating within the television screen.

Kepplinger (1982) content-analyzed the visual presentation in news coverage of two candidates for political office. He started by interviewing professional camera operators and asking them what would constitute positive and negative treatment of a subject. The responses fell into three general categories: shot sizes, perspectives, and camera movements. Shot sizes refer to the perceived camera to subject distance (e.g. close-ups, face shots, mid-shot, full-length shot). Perspective refers to the camera angle (e.g. eye level, bottom view, top view). Camera movement identified whether the shots were static, camera position actually moving, zooming in or out with lens, or panning left or right. The camera operators said close-up and face shots and eye level perspective were more positive. And in a slight contradiction with Tiemans, they said static shots as opposed to camera movement or zooms placed the candidates in a more positive light. In his study of the coverage of the two candidates, he found one candidate received more positive "optical commentary" than the other. The candidate seen in a more positive light was seen in more close-ups and face shots. The other candidate seen in a less positive light had more full length and wide shots, more top views (high angle shooting down) and more camera movements which depicted him in a negative manner.

Changing the perceived distance between the camera and the subject apparently affects viewers' response to pictures. Drew and Cadwell (1985) found that television

viewers tended to focus on the verbal channel and did not react to discontinuity in the video. They did find, however, that when the camera moved in for a close-up, the video was evaluated more favorably on several credibility measures -- real, true, believable, accurate, reliable, and faithful. These closer pictures were also considered more relaxing, important, informative, clear, easy to watch, and likable than shots further away. This kind of positive portrayal of people through close-ups is an important framing device that needs to be considered when examining claimsmakers represented on television. The visuals may have the ability, simply by changing the distance between the camera and the subject, to affect viewer perceptions of an spokesperson, and by association, the advocated position of that spokesperson.

Grabe summarized these presentation features when comparing "visual bias" in political coverage in South Africa (1996). She found there were qualitative differences in how one political party was covered in comparison with others. While ignoring the verbal messages, she did use some standard visual structures, defined them and provided associated meaning that is often attached to the shots (Table 2-1).

Because few studies about television pictures have used framing theory as a guide, this section has drawn from other areas including visual bias, credibility based on visual messages, pictorial treatment, presentation structures, and shot variation. All of these help explain visuals as potential framing devices. Another aspect of visuals as framing devices deals with their co-occurence with words and phrases. Pictures and words can mutually or laterally modify, reinforce, or amplify certain meanings in television news. For this reason it

Table 2-1. Summary of Meaning Associated with Different Shots

Shots (Camera - Subject Distance)	Definition	Referential Meaning
Close-up shot	Face only	Intimacy, Positive
Medium shot	Face and chest	Credible, Personal
Full shot	Full body	Social relationship
Long shot	Setting and characters	Context, scope, public distance

is also important to examine which pictures occur with which words, or visual-verbal redundancy, in these news stories.

Frame Resonance through Visual-Verbal Redundancy

Framing involves the selection and salience of certain aspects of an issue. The repetition of images can be a powerful framing device. If a visual image is repeated often enough and over a period of time, that visual image can "cultivate" meaning (Gerbner & Gross, 1976). Repeated visual images can evolve into "news icons." News icons can be powerful. They are images enabling condensation of information that arise out of a news event that evoke primary cultural themes. When visual images support and reinforce cultural themes, resonance occurs. They are audible or visual emblems of decisive moments or focusing events that can be invoked with a simple phrase of visual reference (Bennett & Lawrence, 1995).

One example of this is the videotaped beating of Rodney King in Los Angeles, which came to represent "police brutality." Another is the "garbage barge" of the late 1980s, seeking a port to unload its New York garbage. This became a symbol which represented the solid waste problem (Bennett & Lawrence, 1995; LaMay & Dennis, 1991).

Broadcasters can then introduce these icons into other stories causing linkages between otherwise isolated events. When these images are repeated often enough, these icons provide symbolic tools for the potential reshaping of political culture and public policy. "News icons' timely and often vivid imagery, along with the cultural tensions they tap into, provide journalists, and their sources and audiences, provocative condensational symbolism with which to work" (Bennett & Lawrence, 1995, p. 25). As frames have been described before, they are mental shortcuts that help define issues. Research is still inconclusive as to just how audiences use this visual information. While visuals may be powerful is many ways, "such fleeting visual impression may be a weak basis for effective comprehension if people lack the conceptual frameworks necessary for making sense of them" (Robinson & Davis, 1990, p.118).

If, however, words are provided with the pictures to help audiences "make sense of them," there is a need to better understand the relationship of words and pictures. Because framing involves organization, interpretation and perception on the viewers' part, the effect of media messages on individuals is a form of learning. The degree of redundancy between visuals and text may comprise framing resonance, which affects the potential teaching power of the message. The degree of redundancy includes the type of audio and visuals

concurrently presented in a television broadcast. This concurrent presentation is referred to as visual and audio channel redundancy. Channel redundancy is the semantic match between the audio and video messages (Grimes, 1991).

However strong the visuals, they cannot be totally separated from the other components in a news story such as the reporter the text and any claimsmaker's statements, because all components modify and qualify each other. There is a history of debate on which is more dominant and how each modifies the other. Some explained the struggle for dominance between "pictorial and linguistic signs" as each being on different ends of a continuum. They can be considered opposites, struggling for control of the middle ground. Mitchell suggests pictures and words "have a long history of interaction" and the relationship between the two is "a complex one of mutual translation, interpretation, illustration, and embellishment" (Mitchell, 1986, p. 44).

While not stating it as relating to framing, Grimes (1991) identified three important reasons, directly linked to framing, to examine the dissonance between the audio and video: (a) the memory code we think of as "the story" must be formed through integration of information from the auditory and visual channels; (b) experimental evidence suggests message understanding is facilitated by the degree to which the two channels compliment each other; (c) news producers have control over channel redundancy through production techniques. Grimes suggested that in order to avoid viewer confusion, the audio channel and video channel should be closely related so the channel reinforcement is processed as one message.

Most researchers have primarily focused on the verbal portions of television's message. Technical limitations have deterred the visual channel from being fully explored. While words can have multiple denotative and connotative meanings, they are easy to count. Pictures, on the other hand, can contain a myriad of non-verbal, scene-setting and mood-setting messages which are more difficult to measure. However, Graber (1988) states, "Purely verbal analyses not only miss the information contained in the pictures and nonverbal sounds, they even fail to interpret the verbal content appropriately because that content is modified by its combination with picture messages" (p. 145). She continues by calling for research that does not rely solely on verbal text only, but must encompass all stimuli--aural and visual--conveyed in news broadcasts. Research must include the visual component because the average scene contains vast numbers of visual stimuli that change when movement occurs in the picture and when camera perspectives change. Both visual and verbal messages must be placed in context in relation to each other. They cannot be isolated.

Some research defends the verbal examination because viewers have a limited attention capacity and often must concentrate on the verbal channel and virtually ignore the visual information (Drew & Cadwell, 1985). The verbal channel perhaps "contains more semantic specificity or is less ambiguous than visual information" (Baggett, 1979 cited in Drew & Grimes, 1987, p. 454). The visuals in a news story perhaps help focus attention on the auditory facts when the two are complementary (Drew & Grimes, 1987). When visual and verbal message redundancy exists, viewers recall more of the message (Son, Reese &

Davie, 1987). Gamson stated that a great deal of visual material is simply filler, adding nothing to the story (1989). But he continues by saying that "on every issue, there are important moments when the visual imagery contributes significantly to one or another story line" (p. 159).

Pictures can "belong" with the verbal channel because text can concentrate attention of a particular approach in the story. "The audio component can favor one or another of the competing interpretations, strongly suggesting a preferred reading" (Gamson, 1989, p. 161). The converse can apply as well. The visual component can give the audio a particular reading. The whole story can be "tarred with a semiotic brush" (Hartley, 1982).

However, when attention has to be split between the two channels (conflicting messages) the result is information loss. The success of visuals depends on how well they illustrate the script (Reese, 1984). When visual recall was measured, the visuals were remembered more when there was less redundancy between the verbal and visual channels (Drew & Grimes, 1985), suggesting the visuals, when isolated or not reinforced, have a superiority over the verbal channel in conveying information.

A good example of visual-verbal redundancy's potential effect on framing was found by Wilkins (1992) when he qualitatively examined television network news stories and found the words supported or reinforced the "expert" or scientific approach to solving the greenhouse problem while the pictures represented the "lay" or common person's approach to the issue. This two-layered message possibly results in the public not accepting the

problem as defined by the experts. The words and the pictures equalize each other as experts and citizens are considered equals on the issue.

In another experiment, Brosius, Donsback and Birk (1996) compared the effects of so-called standard pictures (routine news coverage pictures) with pictures that matched the verbal message more closely. They found that these routine pictures did not facilitate retention of news content. In fact, the stories that contained routine related footage received the same scores for retention as the "radio-only" version. It was the pictures matching the verbal message precisely that enhanced retention of news information. Graber also found that unique pictures contributed more to learning from television than routine pictures (Graber, 1990)

Lang (1995) found that multiple channel redundancy has the strongest effect on memory. This suggests that on every level of memory processing--including encoding, storage and retrieval--the combination of audio and video was more effective than single channel presentations. Visual information was found to be superior to the verbal channel at both recognition and recall. This occurred even when pictures conflicted with the verbal channel. Stories are recalled better if they have visuals than if they have no visuals or if the visuals add little additional information. "Talking heads" or interview portions were considered a "separate category of visuals where the redundancy with the visual is unclear" (Lang, 1995, p. 110).

The conclusion one can draw from research of the visual components is that visual cues can contribute to the meaning viewers attach to stories. But it is the combination of

both the visual and audio channel that yields some effects (Mandell & Shaw, 1973). A content analysis supported by framing contexts is one way of exploring the audio and video channels.

Content Analysis Techniques

The place to begin understanding television framing is by understanding what is actually on television news. Media framing analyses require methodical examination of media content. The answers to a series of questions in a single sentence from Lasswell identify where one can start to learn about communication processes such as television. Lasswell said communication study is about "*Who, says what*, in *which channel*, to *whom*, with *what effects*?" (Rogers, 1994, p. 203). The "says what, in which channel" is the basis of content analysis. The visual analysis examines what is "said" through the picture channel.

Traditional content analysis focuses on text analysis, an important part of this study, but analysis of visual and audible content presents specific challenges. Various techniques of television news content analysis include the distinction between component coding (individual shots) and "gestalt" (overall impression) coding. Some examples include Graber's (1990, 1988) visual theme analysis and Gerbner's (1976) television violence analysis including second-by-second examination of content.

According to Graber (1988), gestalt coding mimics common information processing steps where coding decisions are made in the context in which each story is embedded. It includes consideration of the story's introduction, sequencing and "the meanings conveyed

by sounds other than words." The anchor's leads are especially important because they "create the frame and set the tone for the entire story" (p. 25). Gerbner (1976) and others (e.g. Tiemens, 1978, 1970) examine detail in each second, even down to the individual split-second frame of television programs. These techniques were both used in this study to examine framing of endangered species on network television.

Conclusion

Researchers have called for increased consideration of context in content analyses (e. g. Graber, 1988). The review of literature was based on the proposed "Framing Context Model" that divided framing research into three general areas: individual, social, and social institutions, such as the mass media. Framing is the process of highlighting some bits of information about an item that is the subject of a communication (Entman, 1993). In each area, the functions of selecting and highlighting content in order to promote a particular problem definition are similar. However, there are differences and these must be distinguished in the research methods.

Based on the levels and locations indicated, the proposed model identifies where distinctions and similarities may occur. Where similarities exist between the three primary framing areas, resonance occurs. Resonance is the process of integration which identifies common or familiar ideas or concepts and because they are reinforced through interaction with the media and others, makes those ideas and concepts appear more legitimate, acceptable and true. This allows for the introduction of the origins of the word

communication--"that which is held in common." Indeed, Neuman et al. (1992) titled their book "Common Knowledge." Framing theory allows for the examination of those ideas that are held common between individuals, society and a mediating institution. At this point, it is important to indicate that "framing" is often be a used as a synonym for "communication" and that is perhaps why it has been used in many contexts. Research using framing as a synonym for communication is meaningless because it cannot distinguish concepts. In order to provide meaning to the concept of framing, additional qualifiers and characteristics must be identified and explored.

The Framing Context Model helps direct research, as specific aspects of framing can be isolated and examined or multiple relationships examined. It also helps to elucidate any relationships in the framing process. "Frame analysis offers a way of specifying the relationship by focusing on the relative prominence of competing frames as a measure of outcome" (Gamson, 1989, p.161). As distinct frames compete between areas, research can identify the successful frames as independent variables.

Framing exists at two levels in each area of the model. Frames exist as mental organizing principles of information process and as characteristics of text (Entman, 1991). Individuals use schemata to process and organize information. Individuals' schemata may be revealed through creation of texts such as letters to the editor, journals, diaries, and letters which reveal the individual framing. Collective framing results in collective thought for processing information. Collective texts and culture are created through outlets such as newsletters, specialty magazines, on-line information, public relations documents and

advertising which reveal group attempts to promote the definition of a specific issue. The news media as individuals and institutions use thought processes to develop and continue certain media practices and institutional structures. Media texts exist in the form of newspaper articles, radio and television news broadcasts, and magazines articles and these media texts then interact with individuals and groups.

Unless researchers carefully place their studies in a specific context, such as indicated in the model, framing research will continue to be fragmented (Entman, 1993). Framing researchers must distinguish between individual-receiver framing, societal-cultural and collective framing, and institutional-media framing. Mass media researchers should carefully place framing research in the appropriate section of the proposed model. Using the term "media framing" distinguishes it from the general term framing and other phenomenon such as "collective framing" and "individual framing."

Framing is interactive and transactional where receivers are not passive but active negotiators. People negotiate with messages in complicated ways that vary from issue to issue (Gamson, 1992) and from context to context. Framing is the process by "which both sender and receiver in a communication transaction winnow and rank units of meaning, and connect them to other units of meaning" (Maher, 1994, p. 8). This model provides the context for micro-level analysis and broader examination of this interaction. This flexibility also promotes multi-method research design which incorporates experimental and survey designs with in-depth interviews, and content analysis resulting in a rigorous examination with complementary internal and external validity. The result is a better understanding of

articles with titles such as "Freezing out the public: Elite and media framing of the U. S. anti-nuclear movement" (Entman & Rojecki, 1993). Titles such as these which incorporate what can be several distinct contexts are clear examples of the usefulness of this proposed model.

As new technologies allow social groups who have traditionally lacked power and credibility of mass media in communicating with individuals and society, understanding all the contexts of framing is important. Framing can help explain powerful media effects when frame resonance occurs. If the individual has a proclivity toward certain ideas and concepts, and the social groups or culture and media reinforce that inclination, powerful effects may result. The transmission of information from one consciousness to another may be achieved. On the other hand, if frame resonance does not occur, there may be limited or minimal effects.

Content analysis is mostly used in the mass media area but can also be used for examining information and communications produced groups and individuals. A great deal of research has focused on print messages. While researchers have examined cognitive response to the verbal channel, they have either virtually ignored the visual channel or received inconclusive and contradictory results when examining the visual channel. This study examined the picture content in the context of what was said in the same story, not to show "incongruity," or lack or redundancy, but to place the pictures in context under the guide of media framing. Under framing, the source of information or claimsmaking is critical in understanding how news personnel select and emphasize certain points. Few

television news content analyses have examined in equal detail both verbal and visual messages from claimsmakers. This study hopes to add new insight into the framing process by examining content at that level.

In framing research the informational content of news reports is less important than the interpretive commentary that surrounds it. These interpretive comments include metaphors, catchphrases, and other symbolic devices suggesting an underlying story line. These devices provide the rhetorical bridge by which discrete bits of information are given context and relationship to each other (Gamson, 1989). In the study of television news, both the verbal and visual channels must be considered as each provides context and interpretation for the other, contributing to the story's dominant frame.

The review of literature also looked at claimsmakers as individuals or groups attempting to define and describe controversial issues. Claimsmakers attempt to frame issues in ways that would result in public policy supporting their interests. They influence media coverage in the form of agenda-building, providing the news media information as evidence to support their claims. This information from claimsmakers is found embedded in news copy. The video news release may be a possible exception, but what has not been closely examined is how claimsmakers have influenced the visual message. "There are many useful accounts of the process of frame sponsorship by skillful image managers. What is lacking is a way of systematically relating such factors to outcomes measured through an analysis of media content" (Gamson, 1989, p. 160). While visual bias has been examined, no

study has examined visual content from the perspective of claimsmaking under media framing theory.

Measurements can be taken concerning the visual message related to each category of claimsmaker and the literature identified framing devices which are the specific words, phrases, and images which convey meaning. The literature on the characteristics of television presentation was reviewed to make the link between framing devices (words and pictures) and the way those devices can be presented on television and the potential effect of those presentations on viewers. As part of television presentation characterisitics, research on visual images suggested close-ups created a more positive impression of most subjects. While many researchers believe the visual image is important, few have used it. Especially in framing research, few have closely examined the visual images. The research also found that matching the pictures and words would create a more powerful message.

Some studies examined the factors or presentation features of visual communication which were peculiar to specific events (e.g. presidential debates) and others have examined narrow portions of the endangered species issue (e.g. spotted owls). No previous study has detailed the verbal and visual treatment of the endangered species issue as a whole on network television news. Because environmental issues and particularly wildlife issues impact society on a regular basis, this study is important to understand the media dialog involved with these events.

Research into visual and auditory congruence has shown that when the visual and audio channel support one another the message is recalled more effectively. However, the

visuals are superior in portraying information by themselves. This visual superiority suggests that the visual channel needs to be examined in more detail to see what is presented and how news production can possibly be altered to improve communication. Several calls to help improve learning from television news suggest incorporating improved audio-visual redundancy (Son, Reese & Davie, 1987; Reese, 1984; Berry, 1983)

Content analysis is a traditional tool for examining media content. Frame analysis is an extension of traditional content analysis. Frame analysis includes consideration of latent messages and context which help to qualify and modify any manifest content. Many picture/word redundancy experiments and content analyses have concluded there are inseparable connections between words and pictures. Most framing studies have limited themselves to verbal analysis, which can be more easily categorized and coded. Some text framing devices such as co-occurence of words and phrases in news copy can be identified through computer content analysis.

This study falls into the category of media framing analysis based on content analysis of television news. It follows the tradition of content analysis in the visual coding procedure, but incorporates computer analysis for the text examination. The combining of visual and verbal analysis allowed for a more comprehensive framing analysis. This study focuses on the message. It cannot infer what message the sender intended or what the networks consciously wanted to send, nor can it determine through what frame the receivers interpreted any message or the effects of any particular framing. This study can make some inferences that television news, as a dominant information source, contributed

to the culture frame, in that during the time period studied, the television networks were a pervasive information source.

Scope and Context of Study

By using the Framing Contexts Model as a guide, this study is positioned in the context of mass media practice with an overlap into the social context as the influence and interaction between media and social movements is examined. The degree of redundancy in messages relates to another overlapping area on the model--the individual and the media. As messages resonate with the individual, more integration of ideas is possible. An important question to ask for this study is whether the textual and visual messages resonate within a particular medium. If the words and pictures support and reinforce one another forming a singular, clear idea, then frame resonance has occurred and framing may be more influential. This is a process of the individual learning from the media. This study looks at a specific mass medium--television news--and its coverage of a specific issue--endangered species in relation to specific social groups--pro-development and industry representatives and environmental groups attempting to influence the debate of endangered species public policy. With this indication of specificity, the methods of media framing can be examined in detail. This is accomplished by identifying the framing devices utilized and promoted by social groups or claimsmakers and embedded in the television news message.

This study is a content analysis informed by framing . It looks at the manifest content of *framing devices* in the media, but they are examined in relationship to one

another. This can be the first step in placing content in context, which constitutes media framing. Previous studies have not brought all the framing components together to understand endangered species news coverage within the context of claimsmaker influence. They have not examined relationships between framing devices closely. This study attempts to identify the usage of some major framing devices, text usage, visuals, and how they relate to claimsmakers in an attempt to understand the framing process better.

CHAPTER 3

METHODOLOGY

Introduction to Methodology

In the last chapter, media framing was introduced as an explanation which describes how information is transferred within society. A detailed study examining specific aspects of media framing in television news is useful in order to better understand the media's contribution to the debate of public policy. Consideration of framing theory can help determine which method is most useful to examine this process. Framing, as a developing media theory, still lacks some consensus among researchers on concepts and domain; however, the use of framing as theory to guide media studies was examined and not only justified as an acceptable theoretic guide, but shown as one that perhaps provides more useful explanatory power than other popular media theories. Content analysis "informed by a theory of framing" is an effective form of communication research (Entman, 1996, p. 57). This study uses traditional content analysis and computer-assisted content analysis combined with qualitative framing analysis methods. Media framing, which is the selection and salience of specific words, phrases, and symbols used by claimsmakers to identify and define a controversial issue, lends itself to this combination of methods because the selection of words and pictures can be measured through traditional and computerized techniques and the meaningfulness of terms and visuals can be determined through

qualitative researcher examination. The method combines both quantitative content analysis and qualitative content examination, utilizing the strengths of each.

Many past agenda-setting studies examining development of public opinion have focused mainly on how "the public" comes to determine the importance or salience of an issue. Salience is making a piece of information more noticeable, meaningful or memorable to the audience (Entman, 1993). Through repetition and emphasis of certain presentation styles and techniques the media help determine the relative importance of an issue to the public. Content analyses guided by framing theory provide deeper insights into what words, phrases, and symbols are emphasized and repeated and how that use may influence the communication process. Many past content analyses have neglected to measure salience of elements in the text and failed to gauge the relationships of the most salient "clusters of messages" or frames to audience schemata (Entman, 1993). The relationship of frames or dominant meaning to audience schemata and public opinion and collective framing is beyond the scope of this study; however, it is assumed that because people are not generally well-informed, framing "heavily influences their responses to communications," both on individual and group levels (Entman, 1993, p. 56).

The relationships of the framing devices used within a news story were the focus of this study, where framing devices are narrative forms and presentational conventions including syntactical structure, script structure, thematic structure and rhetorical structure (Pan and Kosicki, 1993). Gamson and Lasch (1983) identify framing devices as keywords, catchphrases, visuals, metaphors, stereotyping and symbols. This study operationalized

framing devices as the specific words and phrases uttered by broadcasters or interviewees and the pictures shown in the presentation of a news story.

This study uses content analysis or the quantification of content to provide a foundation for a frame analysis. Frame analysis extends content analysis by placing content in context, moving "beyond the text" (Schlechtweg, 1996) through the use of qualitative methods which provide depth, richness and understanding. Content analysis techniques will be used to identify, categorize and enumerate framing devices, such as key terms and dominant visuals, which will provide data for a framing analysis. A starting point for framing research is examining media content.

Framing analysis extends the understanding of media influence beyond whether or not the issue is important. Framing examines *how* the issue is considered and defined by delving more into the meaning attached to certain messages. Bits of information can be made more salient by placement and repetition and by associating them with culturally familiar symbols (Entman, 1993).

The previous chapters described the growth and fluctuations in the American public's concern for environmental issues and the growth of the environmental movement, and also provided background of concern for wildlife and endangered species. The characteristics of television news were also presented. That background combined with content analysis provides the basis for further interpretation of the frames presented in media coverage. An understanding of the television news process provided by an analysis of

the output or content provides clues into the nature of television news and the pressures and processes involved in the creation and definition of a reality by television news.

Many content and frame analyses have focused on media verbal messages and have ignored or suppressed the importance of visuals; however, television is considered a visual medium with messages presented through the visual channel in addition to the verbal channel. Some content analyses have examined the lack of redundancy between the visual channel and the audio channel, which resulted in reduced viewer learning from television. The application to framing analysis is that as the audio and visual channels combine to present a cohesive message, frame resonance occurs and framing effects are stronger. "Receivers' responses are clearly affected if they perceive and process information about one interpretation and possess little or incommensurable data about alternatives" (Entman, 1993, p. 54). The redundancy between the verbal and visual elements is a critical component of this study.

Specifically, this study examines how the endangered species issue was portrayed and defined or framed through words and pictures and the source of claims made about endangered species on the three major television network evening newscasts from 1968 to 1997. It is a content analysis of the text and visuals in the stories and an examination of the patterns of the relationships among these story elements, which extends the study to a frame analysis of story focus and dominant message.

Research Questions

The general research question is, "How do network news stories concerning endangered species represent or reflect competing claimsmakers views?" This guides the development of the following subordinate research questions and the subsequent hypotheses. Because framing is the attempt by competing claimsmakers to define and describe an issue by selecting and making salient certain words, phrases, symbols and pictures which typify their argument, categorization of these framing devices is essential in its understanding. By identifying specific words and pictures associated with various categories of claimsmakers or interviewees in the stories, patterns of frames can be observed. By quantifying the relationship of the words spoken during interview segments by claimsmakers and comparing those words to the actual pictures, an understanding emerges of the dominance of certain framing methods of endangered species.

General descriptive data is gathered for each story from the story abstracts and from a general viewing of the story to provide context for specific questions. The research questions were divided by the three different research phases involved in this study: verbatim computer text analysis, visual analysis, and the relationship of the text and visuals. Each research question is designed to examine specific aspects of media framing in order to avoid confusing general concepts with more specific, detailed information. The phases, placed in context of the claimsmaker involved with each story element were: (a) a computer-assisted verbal analysis, (b) a shot-by-shot examination of the visuals and, (c) a quantitative and qualitative examination and analysis comparing the relative appearance of

certain framing devices with others. The analysis of the relationships among the three steps will provide a more complete picture of the use of the specific framing devices utilized in media framing (see Figure 3-1). Each research question is listed below with an explanation of the type of information that will help to answer the question.

Research Question 1 - General Nature of Stories

What is the general nature of endangered species stories on network television news? The answer to this question provides a context within which the other questions will be examined. It is important to know the general nature of the stories before the specific framing devices of interest can be categorized and the association of those framing devices with various claimsmaking groups explored. The general nature can be determined through examination of abstracts of news stories available on-line from Vanderbilt News Archive. The abstracts contain information such as date, network, length of story, a story summary and a list of people interviewed in the story.

Research Question 2 - Key words, Terms and Phrases

What are the key words, terms, and phrases used in the broadcasters' (anchor and reporter) text and in claimsmakers' interview segments in network news endangered species stories? The answer to this question is critical to the understanding of claimsmaker influence on media presentation and subsequent influence on public opinion. The determination of which words, terms, and phrases are emphasized and repeated reveals framing techniques used by advocacy groups and the media.

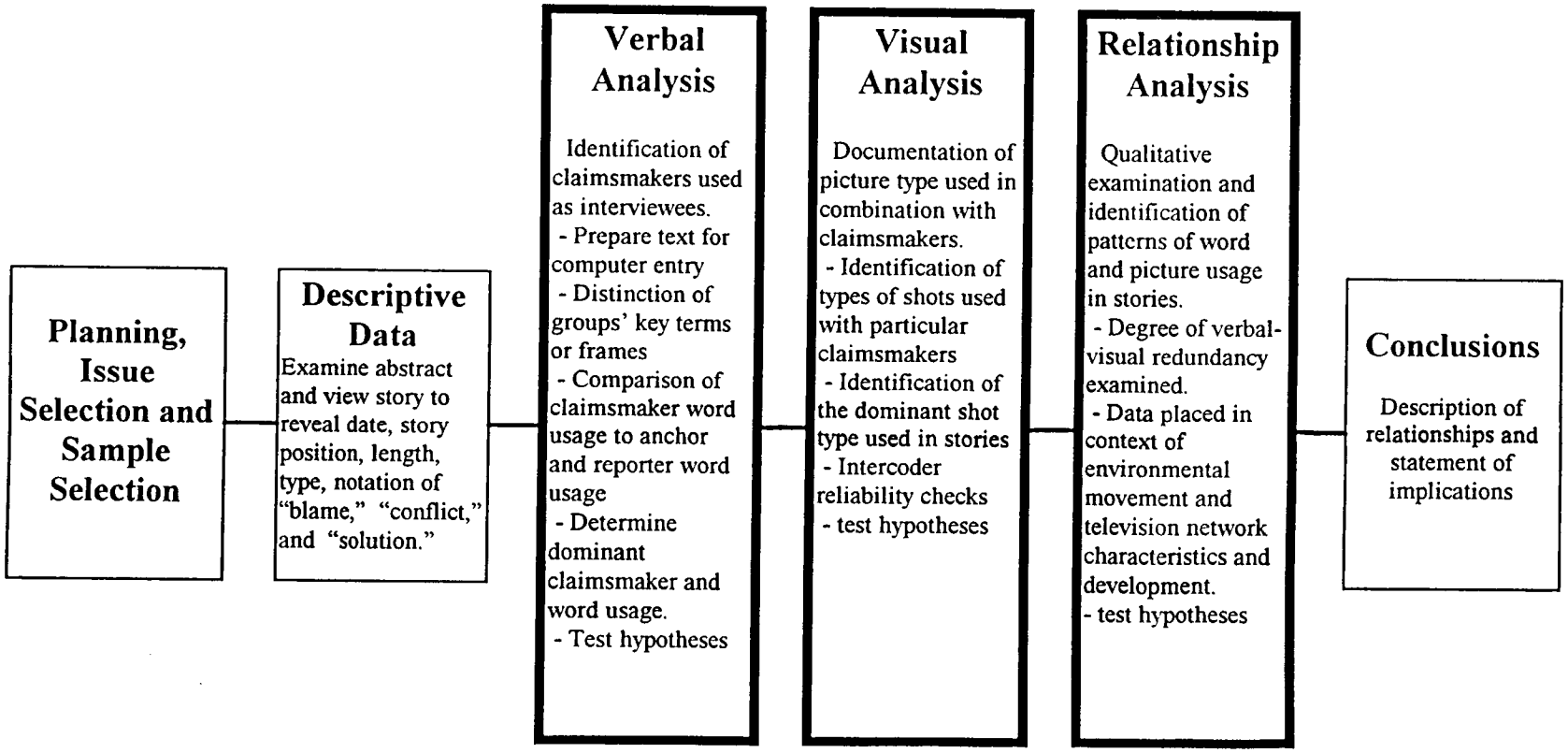


Figure 3-1. The Three Main Stages of Verbal and Visual Analysis : The Steps to a Network News Framing Analysis

Under framing theory, there is an assumption that different claimsmaker groups use unique and distinct language in the attempt to define and describe a controversial public issue (Bengston & Xu 1995; Riechert, 1995; Fan, 1994; Fan, 1988). Through computer-assisted analysis, a "frame" or set of words unique to a group can be determined through examination of specific word and phrase frequency found in their own interviews and by the consistency of words appearing together or co-occuring in the text. The broadcaster's text is operationalized as the words spoken by network newspersons during their presentations as anchors and reporters. The claimsmaker's text is operationalized as those words spoken by individuals during interviews in news stories as they represent competing groups. All interviews can be placed in a claimsmaker categories and thus all words are examined.

Based on past research, different frames should be distinguishable by most frequent word usage by interview source (Riechert, 1995) and by anchor and reporter segments. The examination of claimsmaker's text will also reveal which group was used most often for interview segments and which group contributed the most words. Past studies indicate government spokespersons should be the dominant source for interviews. However, public relations efforts by environmental groups and industry representatives may have resulted in increased interviews with those groups. This relationship is of interest for this study as these groups often compete for issue definition and development of public policy. The use of testimonials or first-hand information from interviews with participants or impacted individuals has shown to influence the perception of public opinion dramatically (Brosius & Bathelt, 1994).

Research Question 3 - Typical Pictures

What pictures showing claimsmakers concerned about endangered species issues are typically used in network endangered species stories and how often and how long are they shown? Just as words, terms, and phrases are indicators of messages, so are pictures. A tenet of television news is that good stories depend on good pictures; however, critics suggest television visuals drive story selection resulting in an over-emphasis on the pictures. This question addresses the visual framing devices that can contribute to the framing process. This aspect of framing is often bypassed because of the difficulty of coding and developing categories for visual. The "shot," defined as a film or video segment in which the visual structure of the image remains constant, is the unit most readily available for analysis. The perceived distance between camera and subject indicates the type of shot. The intimate close-up shots, the slightly more removed medium shots, and the neutral long shots of claimsmakers and their actions make up the three potential basic categories of pictures in endangered species stories. The different uses of these three types of shots of claimsmakers and their activities will reveal the visual framing devices associated with particular claimsmaker groups. Other researchers have referred to an imbalance of picture types as "visual bias" (Grabe, 1996; Tiemans, 1978; Tiemans, 1970). Not only may different claimsmakers be shown in different types of shots for different lengths of time (Brosius & Bathelt, 1994), but the various animals pictured are expected to be "charismatic" and "majestic" animals (Kohm, 1991). These television visuals will perhaps show animal close-ups depicting human characteristics, which contradict a possible pro-development and

industry position that indicates animals are simply resources for economic development. It must be noted however, research in this area is not fully developed and thus this research is more exploratory in nature.

Research Question 4 - Visual/Verbal Redundancy

How are the pictures of claimsmakers and their words used together in network news stories about endangered species? What is the relationship of usage between verbal messages and visual messages in these stories? By combining coding from the stories' general nature obtained from the abstracts and the verbal and visual analyses, patterns can be observed and models developed which can potentially explain when and how certain claimsmaking activity occurs in network news stories. If verbal-visual redundancy dominates or the same "message" is presented in the text and visuals, these stories should provide powerful learning opportunities for the public. If visual-verbal redundancy is weak, the expected viewer results are viewer confusion, lack of interest and reduced learning as the visual and verbal channel compete for attention. Critics claim television environmental news provides some information that may influence public opinion concerning environmental issues, but that television news is ineffective in helping to actually improve environmental conditions. The link between attitude and behavior is still undefined. Therefore, as it has been shown in previous studies with other issues, it is expected that endangered species stories will also have conflicting verbal and visual messages. The viewer

response to these conflicting messages is beyond the scope of this study but the documentation and examination of the relationship of visual and verbal message redundancy within a story is within the area of study.

Hypotheses

The research questions outlined previously were subsequently focused into testable hypotheses. The explanation of quantification and definitions of support for each hypothesis is explained in detail later in the chapter.

Hypothesis One seeks to test which group of claimsmaker's words were more often used and repeated in news stories. The relationship of industry v. environmentalist influence with the news media is the most interesting relationship.

> **H_1** - The number of **industry/pro-development terms** used in the reporter/anchor text will be significantly higher than **environmentalist terms** in the anchor/reporter text.

This addresses one component of the question of which claimsmaker group dominates the verbal component of television news stories. This will be tested through a t-test comparison of the means of the frequencies of environmental terms and the frequencies of pro-development terms in the sampled stories.

Hypothesis Two seeks to determine which claimsmakers and their activities appear more often than others in the pictures in television news stories. This hypothesis addresses the concepts dealing with the type of pictures typically used in network television news. Because of the alleged power of pictures in television news, an enhanced knowledge of how

those pictures are used helps to determine which group may have more influence on the framing of these stories.

> **H2** - The number and total length of **environmental pictures** used in the video portions of the news stories will be significantly higher than **industry/pro-development pictures** in the video portions.

This will test a specific relationship of environmental and industry influence on news coverage, and will be tested through a t-test comparison of the means of the frequencies of pictures and total length of pictures of the two claimsmaker groups and their activities.

Hypothesis Three addresses the concern that television news provides a confusing mixture of text and pictures. Previous research has shown that attention and learning increase with increased visual and verbal redundancy. Each claimsmaker group, therefore, should have a goal of increased attention and message retention of its position. As the verbal and visual messages support each other, frame resonance can occur and the message may become more familiar and believable to the viewer. Consequently, it is important to know whether visual and verbal congruence occurs in these news stories.

> **H3**- Based on the research that shows there is little redundancy between visual and verbal messages in network television news, most of the network television endangered species news stories will have **high industry verbal** scores and **high environmental activist visual** scores.

Relative verbal and visual claimsmaking in these stories will be placed into high and low categories and will be tested through a chi-square analysis resulting in a cross-tabulation of high and low industry verbal scores by high and low environmental visual scores.

Population and Sample

Content and frame analyses should originate with questions which lead to the selection of a suitable sample. Unfortunately, many studies began with an examination of possible samples and then questions were generated later. In television news analysis, sample selection has to do with the limited nature of the availability of television news footage. In order for research to be conducted, it must be ascertained whether the footage exists or not. Fortunately, the Vanderbilt Television News Archives has recorded the major three American network newscasts for the past thirty years which includes the news footage of interest for this study. The three major television networks, ABC, CBS, and NBC, were selected because of their dominance during the majority of the study's time period. Cable News Network (CNN) did not become a key player until the late 1980s.

This study used a census of 813 abstracts of endangered species news stories listed in the Vanderbilt Television News Archives on-line index to establish the sampling frame. This population was obtained by a computerized on-line search of the Vanderbilt Television News Archives using the search terms "endangered species" or "wildlife." This combination of search terms was found to be the most effective in finding stories concerning both endangered species and threats to wildlife. It found abstracts that contained both "endangered" and "species" together or the term "wildlife" by itself. Search terms such as "animal" brought up many stories concerning pets, animal experimentation, and human interest features about common domesticated animals, rather than wildlife and rare species, which are the most prominent focus of the Endangered Species Act. This search strategy

did not guarantee a compilation of all endangered species stories but it was determined to be sufficient for obtaining a sample of stories. It is also recognized that endangered species has certain legal definitions which were not always used in broadcast stories. The intent was to find stories addressing the issue and not under the legal definition of whether the animal was indeed listed as endangered or not.

The story population is not *all* the endangered species and wildlife stories that aired on network news, but it is *all the stories that Vanderbilt identified* and those story abstracts that *Vanderbilt chose* to include with the terms "endangered species" and "wildlife." This suggests that there are stories out there that won't be included in the sampling frame due to Vanderbilt's methods. A preliminary examination by the author showed that the "hits" from these searches found few non-endangered species stories. Consequently, the author felt confidence that this search method would identified most of the stories germane to this study. The computer generated a list of stories for each year ranked according to the number and frequency of the three search terms appearances in the story's abstract.

Several stories were eliminated from the sampling frame because they used the "endangered species" term in contexts such as "the American dream home is an **endangered species**" or the "National **Wildlife** Federation" made a statement about another issue which was not directly related to wildlife. While the search terms picked up some of these unrelated stories, it is also possible the search terms missed some stories concerning endangered species because the abstracts may have only included specific species names without mentioning endangerment or their status as wildlife. For example, in

January of 1997 the networks covered the controversy of the U.S. Fish and Wildlife Service killing wild buffalo that wander out of Yellowstone National Park. Ranchers feared the wandering buffalo will spread disease into their domestic cattle herds. These stories did not appear in the story population because the terms "endangered species" and "wildlife" did not appear in the abstracts. Abstracts with the term "wildlife" were only included in the sample if the story abstract mentioned endangerment or threat to wildlife and associated events or problems. Some stories were eliminated because they discussed problems due to the overabundance of wildlife such as excessive numbers of blackbirds causing problems at an airport. Stories that discussed excessive animals in the context of what was once a threatened or endangered species remained in the sample. One example is the wild horse population, once considered seriously endangered. Now, because it has been protected since the 1970s, it has recovered and conflicts with ranching interests.

The search of the Vanderbilt Archives in early February, 1997 using the search terms "endangered species" and "wildlife" revealed a total of 813 individual entries or stories. Only the month of January was available for 1997 and there were no stories listed for 1997. The range consisted of a high in the year of 1989 of 79 stories to a low of no stories in 1997. The list of 813 stories retrieved through the computer search was used with a list of random numbers to generate a sample story list for each particular year. The researcher desired a convenient quota of at least 150 stories making up a representative sample of stories stratified-by-year. A desired sample of 150 stories was selected to provide a manageable number while maintaining enough stories to allow for sufficient analysis and

statistical power. The representative yearly percentage of the 813 stories from each year was calculated and a list of random numbers was generated for each year for the number of stories necessary to fill the percentage of the 150 stories (see Appendix). For example, if the year 1970 contained four percent of the stories (33 stories) in the total population of approximately 813, then four percent of 150 (6 stories) would be included in the total sample for that year. Due to the rounding of each year's percentage of stories, the actual number of stories designated for inclusion in the sample was 165 (see Appendix for sample list). The sample consisted of a range of 16 stories in 1989 to no stories in the first two months of 1997. Consequently, the year 1997 was eliminated from the population and sample. A preliminary sub-sample of 34 stories (one story from each year and several additional sample stories to make up one hour of tape) was leased from Vanderbilt in December 1996 at the "research rate" of $60.00 for 20-minute minimum segments with a $30.00 processing and mailing fee for a total of $210.00. The sub-sample was obtained to conduct pre-testing on the coding instrument. The remainder of the 130 stories were ordered in February 1997 at the approximate cost of around $900.00, paid by the author.

This study's overall time frame focuses on a thirty-year period from 1968 to 1997. Researchers (Riffe, et al., 1996) have suggested that television news samples may be susceptible to idiosyncrasies of weekly and monthly cycles. With the time frame of thirty years and the computerized search techniques used, weekly and monthly cycles are not factors because the sample was selected from a computer-generated list which ranked the stories by search term frequency and not by day of the week or month. The time frame

begins with the year 1968, the year of the first material available from Vanderbilt Archives. 1968 can be characterized as a time of emerging public concern for the environment and a time period representing a maturing period for network television. This is considered a "critical debate period" which should reveal important aspects about this subject. This study addresses a relatively long period of time--thirty years--and considers the endangered species issue portrayal of the endangered species issue over the entire time period.

These numbers and coverage patterns correspond well with, but appear greater than, a manual search of Vanderbilt's records of endangered species stories conducted as a pre-test for the years 1973 to 1993 (Smith, 1995). The computer-searchable index was not available on-line at the time of that study. The manual examination of stories listed under animals, wildlife, and endangered species in the Vanderbilt indices found a total of 397 stories. In that pre-test, the range included a low of one story a year to 26 stories a year with a mean of 19 for all network stories in each year.

Data Collection

The search of abstracts in Vanderbilt University Television News Archive on-line listing provided the population parameters including number of stories, network, story length and general topic. The computerized text analysis and the videotape content analysis provide descriptive and quantitative data known as the "hard" approach compared to the "soft" approach in content analysis (Frank, 1973). The soft approach involves examination of framing and context, which provides analysis of a general nature which leads to the

"progressive definition" and construction of the issue as expressed by text, audio and visual depiction and statements from claimsmakers (Jacobs, 1991). The hard approach uses content analysis of specific framing devices in the text and visuals while the soft approach uses more researcher subjectivity to analyze the general nature and overall framing of the stories.

In order to answer the research questions and collect data sufficient for hypotheses testing, an understanding of the development and procedures for successful content analysis and frame analysis is necessary, though framing analysis will be detailed later.

As discussed in the previous chapter, Krippendorf (1980) stated three basis steps of content analysis: design, execution and report. Singletary (1994) indicated the procedures for content analysis typically follow the steps detailed below; select topic, decide sample or census, define concept or units to be counted, construct categories, create coding form, train coders, collect data, measure intercoder reliability, analyze data, and report results.

Issue Selection

The issue of endangered species was selected because it is controversial, which provides a media forum for various claimsmakers to attempt to influence the debate. Because claimsmaking is such a critical concept of media framing, the endangered species issue is ideal for examination of media framing. Additionally, endangered species have a history of prominent news coverage, so trends and patterns of uneven specific episodic coverage will not influence overall understanding of the issue. In relation to the types of

stories and the accompanying pictures, endangered species stories have several options for presentation techniques ranging from the hard-news story to the human interest feature.

Unit of Analysis

The unit of analysis can vary considerably between studies. The units of study can range from entire newscasts to video frame-by-frame inspection (Tiemans, 1970). The unit of analysis for this study is the individual news story. For network news, the story length can vary significantly from several seconds to several minutes, and each television story can present information in a variety of ways. The anchor can tell the story with no video or interviews (anchor reader), the anchor can tell the story with video (anchor voice-over), or the anchor can introduce a reporter who tells the story with interviews and pictures (reporter package). The reporter provides the most information because it includes pictures and interview segments where interviewees are directly cited and labeled. Based on similar studies (Liebler and Bendix, 1996; Smith, 1995; Greenberg, et al., 1989), it was expected that approximately half of these stories would be reporter packages. The other half was expected to be anchor readers and anchor voice-overs, possibly with a few pictures, but no interviews. A story was considered for inclusion in this study if a separate listing was posted in Vanderbilt's abstracts. Within each story there were many textual and visual cues to consider as framing techniques or devices. In order to make the data more manageable, items of interest within each story was arranged into or coded for mutually exclusive categories. Thus, each story received scores for various categories.

Coding Categories and Operationalization

The categories, as assigned on the coding sheet are detailed below. The author began coding the stories in May, 1997. The author inspected the abstracts, transcribed the text, viewed the tape and examined the individual shots in order to complete the coding sheet. A binder of completed coding sheets was kept at the author's home and a copy of each coding sheet was maintained at the author's office.

The first step to obtain acceptable reliability in content analysis is to create precise definitions of categories (Krippendorf, 1980). Category construction for this study is based on the research questions and the concepts derived from previous studies. These categories are listed below by the separate phrases of this research.

Abstract Examination and General Viewing for Descriptive Information

The abstract for each of the sample stories was downloaded to a computer file from the on-line site and printed to a hard copy to allow for full examination. These abstracts provided descriptive information to answer peripheral questions and provide context of the nature of the coverage (see Appendix for sample abstract). This information included the date of broadcast, which was recorded by month, day and year. The television network, either ABC, CBS, or NBC was noted, and the reporter's name was recorded as well as the geographic location. The specific location was recorded on the sheet and then placed into a category of one of nine geographic locations similar to Greenberg et al.'s (1989) categories, which determined news coverage was closer to news bureaus in the northeast, southeast

and California. The geographic categories coded were: (a) United States--Northeast, (b) US--Southeast, (c) US-Midwest, (d) US-Southwest, (e) US--Mountain states, (f) US--Northwest, (g) US-Alaska, Hawaii and Territories, (h) International, and (i) Multiple locations.

The story type was divided into three categories, determined according to whether: the anchor reads the story with no film or video (reader); the anchor narrates the story with video (voice-over); or the anchor introduces a reporter who then narrates the story with film or video (package).

Interval data was available in the total length of each story as listed in the abstract, where the length in time included the anchor introduction or lead and any reporter portions. Vanderbilt rounds all story times to the next ten second increment. For example, if a story is 2 minutes and 4 seconds long, it is recorded as 2 minutes and 10 seconds. The minutes were calculated into seconds and the starting time from the beginning of the newscast was also recorded in seconds. A categorical variable was recorded as an indication of whether the story was the last story in the newscast or not. All this information was manually coded onto the coding sheet in preparation for computer data entry (see Table 3-1 or Appendix for entire coding sheet). Due to its objective nature, this information was not submitted to intercoder reliability checks.

The researcher viewed the tapes on a VCR with pause and rewind functions to allow for careful examination. Then questions were answered concerning the general nature of the

Table 3-1. Abstract Information Section of Coding Sheet

Var.	Coding Information	Code
1.	Case number	
2.	Coder 1. Author 2. 2nd Coder (date coded / / 97)	
	Information from News Archive	
3.	Story slug _____	
4.	Date of Broadcast Month/day/year	/ /
5.	Network 1. ABC 2. CBS 3. NBC	
6.	Reporter name _____	
7.	Geographic location (specify) _____ 1. US-NE 2. US-SE 3.US-MW 4.US-SW 5. S-Mount 6. US-NW 7. US-AK.HI 8. Int. 9. US & Int	
8.	Type of story - 1. Anchor Reader 2. Anchor VO 3. Reporter package	
9.	Story Length (length in seconds including anchor) ___ min. __ sec. =	secs.
10.	Starting time from beginning of newscast _____ min. _____ sec. =	secs.
11.	Last story? 0. No 1. Yes	

endangered species story, such as, who is to blame for the specific problem and who, if any, were the groups in conflict. All data from this segment were categorical. The first question in this section addressed the classification of the animals which were the focus of the story. The seven categories were: (a) no animal classification is central, (b) mammals (including marine mammals), (c) birds, (d) fish, (e) reptiles and amphibians, (f) insects, plants and other, and (g) two or more different animals. The coding sheet also provided for open ended notation of the central focus of the story on specific species such as "wolves," "elephants," and "dolphins," allowing for collapsing of categories when all sample stories were recorded.

The dominant cause of the endangered species problem or conflict as stated in the story was placed in one of nine categories based on the general impression given by the anchor lead, reporter narration and interview emphasis. The categories included: (a) no problem or no cause of problem or conflict indicated, (b) accident, poor planning,

government inefficiency, (c) manufacturing, industry, forestry, mining, (d) natural causes, (e) habitat destruction due to human encroachment or human over population, (f) government over-regulation, (g) "man" or "humans" in general, (h) over-zealous environmentalists, and (i) other.

Claimsmaker Categories. The concept of claimsmaker groups advocating their positions through appearances on network television requires distinction of groups through categorization. The groups making claims or those mentioned in the stories were coded into six categories and operationalized by affiliation with: research; environmental activist groups; non-affiliated individuals; pro-development and industry representatives; legislators and executive government representatives; and regulators or law enforcement. In the first research stage, categories describing the claimsmaker groups who disagree with each other were recorded. These same claimsmaker categories were used in other data collection phases and were coded into categories similar to previous studies (Miller, Boone and Fowler, 1989; Cottle, 1993; Singer & Endreny, 1993; Yaffee,1982). The following list provides operationalization of the claimsmaker categories.

Researcher/expert/scientist

Biologists, zoologists, professors, any listed as "studied for a long time," or "studying," or organizations evidently structured towards research.

Environmental activist/pressure groups

Relatively well known groups such as Greenpeace, Defenders of Wildlife, World Wildlife Fund, other regional and local environmental advocates where group affiliation was noted.

Non-affiliated individual

No indication of affiliation with a group such as man, woman, tourist, etc.

Pro-industry/Business/industry representative

Any "spokesperson" for an indicated industry. These included lumber, fishing, land development and energy resource industries and government

entities and their employees speaking from the context of supporting development and industry, etc.

Legislator/executive representative, federal, state or local

Senator, Representative, Governor, Mayor, International representative, US President.

Regulator/law enforcement, federal, state or local

US Fish and Wildlife, Dept. of Agriculture or Interior, National Park Service, Commissions such as International Whaling Commission, law enforcement.

The nine categories used for coding the conflict between groups were: (a) no apparent conflict, (b) environmental activists vs. pro-development, (c) environmental activists vs. government, (d) environmental activists vs. scientists, (e) pro-development vs. government, (f) pro-development vs. scientists, (g) pro-development vs. pro-development, (h) government vs. government (inter-agency disagreement), (i) scientists vs. scientists, (j) scientist vs. government, and (k) other. Conflict was defined as any use of words and phrases in the text or visuals which imply opposition, argument, conflict with, objection to, misunderstanding between, disagreement with, clashing, contradiction, contention, battle with, struggle with and protest against another group or within a group.

Another categorical variable concerned an indication by the anchor, reporter or interviewees of which of the claimsmaker groups should solve the problem in the story. Evidence was considered as supporting one claimsmaker over another if mention was made that the problem was being studied, or a solution will be proposed, or someone will have to fix the problem.

The categories were (a) no indication of problem "solver," (b) scientists, (c) environmental activists, (d) pro-development, (e) government, (f) general public, (g) several

groups working together, and (h) other. All these items from the general viewing of the stories were manually entered onto the coding sheet in preparation for computer data entry (see Table 3-2). These were submitted to inter-coder reliability checks described below.

Text Analysis

The concept of claimsmaker groups using a unique vocabulary to describe and define their position on a controversial topic requires a detailed text analysis. This analysis provides a description or list of the distinct words, terms and phrases used by that particular group. Text or the verbal message is the element that is most often analyzed in television news. The verbal message is studied because the reporter narration "sets the agenda for the film used in the report" (Gans, 1979, p. 158). This component of the message is critical to establishing the "frame" and placing all other components (visuals, interviews) in context. A significant contribution of the text is the anchor lead. Leads must be analyzed because they are the "hook" designed to attract audience attention, normally state a highlight, raise a moral issue or question a common expectation or stereotype (Gans, 1979, p. 161). The words spoken during the interview segments are important as well because the interviewees compete for credibility and the opportunity to define issues (Best, 1989). Text analysis also looks for catchphrases and repeated word usage (Entman, 1993).

The researcher transcribed the stories verbatim into a computer text file. This computer file was then prepared for entry into the VBPro family of computer software created by Mark Miller from the University of Tennessee, Knoxville. The preparation

Table 3-2. General Viewing Section of Coding Sheet

Var.	Coding Information	Code
12.	Story focuses on which animal classification? 0 no animal shown 1. mammal 2. birds 3. fish 4. Reptiles/amphibians 5. insects, plants and other 6. Two or more different animals were the focus	
13.	Central focus is on which animal species?_____(to be collapsed later)	
14.	Causes of endangered species problem or conflict in story. 0 no cause or conflict indicated 1 accident / poor planning/ government inefficiency 2 manufacturing/ industry/ forestry/ mining 3 natural causes 4 habitat destruction due to human encroachment 5 government over regulation 6 "man" or "humans" in general 7. Over zealous environmentalists 8. other (specify)_____	
15.	Conflict - Which groups disagree? Pick the most prominent 0 No apparent conflict 1. env. activists vs. pro-development 2 env. activists vs. government 3 env. activists vs. scientists 4 pro-development vs. government 5 pro-development vs. scientists 6 gov. vs. gov. (inter agency dispute) 7 scientists vs. scientists 8 scientist vs. government 9. pro-development vs. pro-development 10. other (specify)_____	
16.	Who should solve the problem? 0. No one indicated as problem solver. 1. Scientists 2. Environmental activists 3. Pro-development 4. Government 5. General public 6. other (specify)_____	

involved spell checking and identifying each story as a separate case, then each paragraph was "tagged" with the category of the claimsmaker (using the same claimsmaker categories as stated above) and anchor or reporter who spoke the words. Tagging involves placing a "pseudo-term" or nonsense symbol in the paragraph that the computer can recognize, but will not be confused with other real words. The "$" sign is used in combination with a word or abbreviation because it is typically never used with letters in a word. For example, placing the term "$anch" at the beginning of all the paragraphs in which the anchor spoke (see sample transcription in Appendix). The computer can then identify and group any desired combination of these tagged paragraphs. Thus, a file can be generated consisting of all the words spoken by anchors, or reporters or environmentalists and so forth. These text segments were coded by anchor ($anch), reporter narration ($rep), and reporter "stand-up" ($repstand), and by interviewee category type or type of claimsmaker ($scisot - scientist or researcher, $envsot - environmental activist, $bussot - pro-development and industry representatives, $legsot - legislators, $regsot - regulators and law enforcement and $indsot - unaffiliated individual. See sample text in Appendix). The "sot" term is a broadcasting abbreviation for an interview or "sound on tape." These tags or "pseudo-terms" were embedded in the text during the transcription process by the author. With these pseudo-terms connected to certain text sentences and paragraphs, the VBPro family of software (Riechert, 1996; Miller, 1995; Andsager and Miller, 1994) was used to determine word frequencies and to search, sort, and compare word usage between claimsmakers, reporters,

and anchors. An intercoder reliability check was performed on this claimsmaker category assignment (described below).

The computer program was asked to generate a ranked list of the most frequently used words by all the claimsmakers in all of the interview segments. This list can be thousands of words long as every word used is listed. The word "the" typically tops the list. These types of functional and connective words such as articles, conjunctions and simple verbs which have little or no meaning in themselves were not included in subsequent steps. For example, the verb "to be" in the forms "is" and "are" was not included, but a more singularly meaningful verb such as "protest" or a noun such as "species" was included.

It is at this point that quantitative and qualitative methods merge. The researcher must determine which words were more meaningful or potent. This process is closely associated with Kenneth Burke's cluster-agon analysis, where frequently used and meaningful words were clustered together by their usage (Burke, 1957). Berthold (1976) said the process begins with selection of key terms made on the basis of frequency and intensity of use. She said the rhetorical critic can reveal the structure of author's motivation operating within literary works by finding a "god term" under which "all other expressions were ranked as subordinate and serving dominations and powers" (p.303, citing Burke, 1957, p. 288). These god terms are words that frequently appear in the rhetoric and "represent the ideal for the rhetor's view of what is best or perfect" (Foss, 1994, p. 136). Other terms support and sanction the god terms. These are called "good terms" (Weaver, 1953). Opposing terms are also analyzed, which introduces the "agon" description in

Burke's technique. These are terms which oppose or contradict other terms in the language, but are terms which may have high usage. The researcher examines how words cluster together or how frequently the terms co-occur.

In the method used for this study, the researcher subjectively determines which words rate further analysis and the computer determines which words were used most often and when they co-occur (Riechert, 1996; Miller, 1995; Andsager and Miller, 1994). With the list of word frequency rankings, the researcher selects the 125 most frequently used meaningful words. This is the number the computer can most effectively compute and is the recommended limit in VBPro (Miller, 1995). The next step involves asking the computer to determine how often the top 125 meaningful words selected from the full list were used in each interview segment. Because there were six claimsmaker "pseudo-term" tags also included, the 119 most frequent meaningful words for a total of 125 were selected by the researcher to analyze the same claimsmaker statements. The computer is then asked to code each story for the number of times any of the 119 words plus the number of times the six "pseudo-terms" for each category identification ($scisot, $regsot, etc.) were used in each story. This creates a matrix of the 125 most frequently used terms by 165, the total number of stories. This matrix is entered in the VBPro Mapper which provides three coordinates for every story and creates another matrix of the three coordinates for all 165 stories. This matrix was entered into SPSS for Windows where a hierarchical cluster analysis of this matrix was generated. This action determines which words fall out with which claimsmaker tag (Riechert, 1995). This is done by examining a dendrogram or a graphic depiction of

treelike branches, which places the "pseudo-terms" identifying who spoke the words in close proximity with words a particular claimsmaker group frequently used. The words spoken by the claimsmaker group should appear on the same "branch" as the tag identifying that group. These particular words and phrases, called a dictionary, are unique to a particular claimsmaker category and are operationalized as the text frame that typifies that category of claimsmaker in discussion concerning endangered species. These words are considered that group's verbal frame.

In the next step, the anchor/reporter text portions of the stories were given a frequency score based on how the particular claimsmaker frames or "dictionaries" were used in the story. This score is based on how many of each claimsmaker terms are used in the anchor/reporter portions of each story. The anchor/reporter portions of each story were isolated in a separate computer file and were computer coded by the six claimsmakers' list of words or verbal frames. For example, one story may use ten of the regulator claimsmakers' terms and another story may use only three. Another story may use 12 of the environmentalists' terms and none of the regulators' terms. The stories with the highest use of claimsmaker terms in each category were operationalized as stories with the "highest verbal or text frame" or "dominant text frame" for that claimsmaker. These were stories that best represent or reinforce that particular claimsmaker group. A dominant frame was determined by the story having more particular claimsmakers terms than any other claimsmaker terms. This step will determine the dominant claimsmaker text frame used in each story.

Another measure of claimsmaker dominance was determined by whether the claimsmaker was in the first interview or not. Although a somewhat arbitrary criterion, the first interview is considered to make a dominant contribution to the story and establish a dominant frame (Riechert, 1996). Because all of these steps were conducted in the computer, the data from the environmental and pro-development terms were not transcribed onto the coding sheet but these variables were identified on the coding sheet (See Table 3-3).

Table 3-3. Text Analysis Section of Coding Sheet

	Information from computer-assisted text analysis	
17.	Number of (1) scientist frame terms	
18.	Number of (2) environmental frame terms	
19.	Number of (3) pro-development/industry frame terms	
20.	Number of (4) regulators/law enforcement frame terms	
21.	Number of (5) legislator/exec. administrator frame terms	
22.	Number of (6) individual/other frame terms	
23.	From which category was the first interviewee? (from story transcription) 1 Scientist 2 Envmtal activist 3 Pro-development 4 Legislator 5 Reglaw 6 Ind	

Visual Analysis

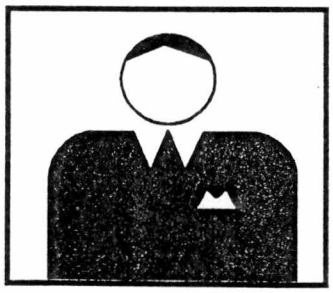
Because the images on television can influence society's construction of reality (Brosius, Donsback, & Birk, 1996; Graber, 1990; Best, 1989; Brosius, 1989), it is important to study them in addition to the text. Visuals were coded by manually playing the video tape, observing the pictures and pausing, rewinding, reviewing and timing each shot in the story. Each story was coded for the number and length of each shot type under eight

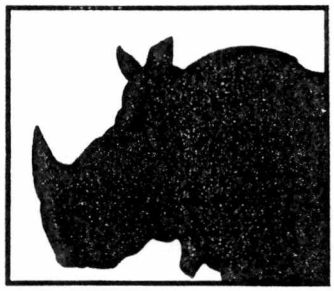
categories, the six claimsmaker categories in addition to animal pictures and reporter or anchor pictures. A video player with pause, rewind control, frame by frame controller and a timing counter was used. A film or video shot was defined by the continuous display of a certain amount of subject matter included within the frame or the field of view. While there were many different kinds of shots, all shots, for this study, once placed into one of the claimsmaker categories or the animal category were further divided into three categories: 1) the close-up - defined as face and chest shots, or shots showing close detailed activity, 2) medium shot - defined as inclusion of the full-body and showing general activity and 3) long shot - defined as stage setting, establishing setting and showing locations and wide scenes (Grabe, 1996; Gianetti, 1990)(See Figure 3-2).

The number of close-ups, full-body shots and long shots were tabulated for each claimsmaker category (environmental activist, pro-development/industry, legislator, regulator, scientists and other individual) (see section below and full coding sheet in Appendix). Shots were considered mutually exclusive. Shots were not placed in two different categories. Blanks were provided on the coding sheet to allow the researcher to tally the length of specific shots, which also facilitated the summation of particular types of shots. Unless a story was particularly long and complex, it was not expected that all sections of the visual analysis portion of the coding sheet would be used. Only those portions that apply to the visuals in the story were calculated. A zero was recorded for those claimsmaker categories which were not represented in the story.

The Close-up Shot.

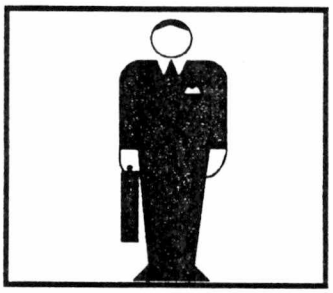
Head and shoulders and closer of people, animals and their activities. Shows subject details.

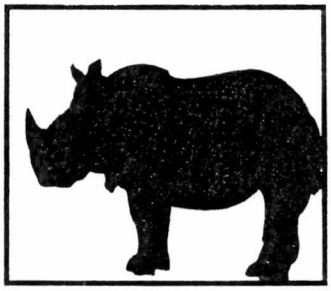




The Medium Shot.

Full body and closer of humans and animals and associated activities. Includes all shots from full body in to head and shoulders shots.





The Wide Shot.

Long shots or establishing shots. These show humans and animals in the context of their environment and activities. Wide shots do not have to have recognizable human or animal figures. Includes all shots from extreme wide shots until they become medium shots.

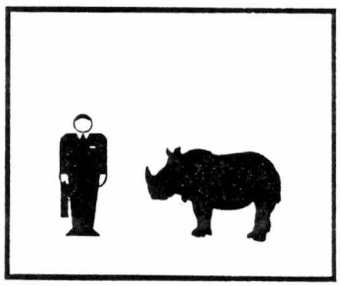


Figure 3-2. Television Camera Shots

A particular claimsmaker was coded as being associated with the subject, setting and characters in the story if the person or activity was identified in the narration or the supporting text graphics as being affiliated with one of the claimsmaker groups. Shots of animals were placed in the animal category if there was no direct mention of claimsmaker activity. Shots were placed in the reporter or anchor category when the broadcaster appeared in the shot whether in reading at a desk, a reporter field "stand-up," or the reporter appearing in a shot during an interview.

SPSS for Windows recoded and calculated the total length of all shots for each claimsmaker and the number of total shots in a story in order to allow the calculation of the percentage of shots associated with a particular claimsmaker in each story (see Table 3-4).

Intercoder Reliability

Any content analyst needs to take steps to determine intercoder reliability since content analysis is based on the assumption that the categories and procedures are replicable and reliable (Krippendorff, 1980). Stempel (1981) suggests that the researcher's primary concern in content analysis is to increase reliability, where reliability refers to the degree that coders agree on classification when examining the same content. Coder procedures and categories must be established to guide researchers in order to ensure that procedures may be consistently replicated.

Table 3-4. Representative Portion of Visual Analysis Section of Coding Sheet

	Information from Visual Examination	
24.	<u>Animal picture type and length</u> Total time (in seconds) of all animal close-ups (Head and shoulder) tally ___ + ___ + ___ + ___ + ___ + ___ =	
25.	Number of close-up shots of animals (total from var. 24)	
26.	Total time (in seconds) of full body shots tally ___ + ___ + ___ + ___ + ___ + ___ =	
27.	Number of full-body shots of animals (total from var. 26)	
28.	Total time (in seconds) of wide shot/establish/contexts of animals in environment tally ___ + ___ + ___ + ___ + ___ + ___ =	
29.	Number of wide shot/establish/contexts of animals in environment (total from var. 27)	
30.	Total time (in seconds) of all shots of animals. (recode to add var. 24, 26 and 28)	
31.	Total number of all types of shots of animals. (recode to add var. 25, 27 and 29.)	
32.	<u>Scientists/Researcher picture type and length</u> * Total time (in sec.) of CU (Head/shoulder) of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ =	
33.	Number of CU shots of Scientists/Researchers. (total from var. 32)	
34.	Total time (in seconds) of full body shots of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ =	
35.	Number of full-body shots of Scientists/Researchers. (total from var. 34)	
36.	Total time (in seconds) of wide shot/establish/contexts of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ =	
37.	Number of wide shot/establish/contexts of Scientists/Researchers. (total from var. 36)	
38.	Total time (in seconds) of all shots of Scientist/Res. (recode to add var. 32,34 and 36)	
39.	Total number of all types of shots of Scientist/Rea. (recode to add var. 33, 35 and 37)	

*Other coding sheet sections were identical to the Scientist/Researcher portion except for the change of claimsmaker category name.

In this study the author coded all 165 stories. Another coder then received training and practice in coding stories. The second coder then coded 20 percent (34 stories) of a randomly selected sub-sample. The two different codings of the same stories were subjected to reliability checks using Scott's *pi* formula to determine an intercoder reliability percentage for each human-subjectively coded item. Scott's *pi* is designed to test reliability between two coders. The formula is:

$$Pi = \frac{PAo - PAe}{1 - PAe}$$

PAo is the percent of observed agreement between two coders, and *PAe* is the percent of expected agreement between the two coders (Scott, 1955). The formula assumes the expected agreement is the sum of the square of the percentage of each category where agreement actually occurred. The closer the reliability estimate is to 1, the higher the reliability or agreement between coders. The consensus on what is acceptable reliability is: pi greater than .70 represents an acceptable level of agreement; .60 t0 .70 is considered marginal; below .60 is unacceptable (Landis & Koch, 1977).

The items on the coding sheets addressing the abstract information and the computerized text analysis were considered objective measurements. Only the items from the general viewing and visual coding procedure were subjected to this intercoder reliability check because they were considered sensitive to coder subjectivity. Each subjective item was examined for coder agreement in the specific categories for each variable. Under the visual coding section, agreement was determined on whether the two coders' answers fell

within an acceptable margin. Because of the rounding of possible videotape counter differences, total time length for shots was determined to be in agreement if the total time fell within plus or minus five seconds. The total number of shots was considered to be in agreement if it fell within two total shots of each other. For example, if on Story 002, Coder A indicated in the category of animals shots that there were 27 seconds and four total shots and Coder B indicated there were 26 seconds in three total shots, these two categories were considered to be in agreement. A straight percentage was calculated for each visual category and a reliability quotient was determined for placement of those shots into the claimsmaker categories. No overall intercoder reliability average among all items was determined. A reliability quotient for each variable in the general viewing section is presented below.

Intercoder Reliability on General Viewing Section

1) According to the news story, on which animal classification does the story focus? (Pi = .91)

2) According to the news story, what is the cause of the endangered species problem or conflict? (Pi = .75)

3) According to the news story, which two claimsmaker groups were the most prominent in disagreement? (Pi = .79)

4) According to the news story, who should solve the problem? (Pi = .60)

5) According to the news story, which claimsmaker category was used as the first interview? (Pi = .74)

Intercoder Reliability for Visual Viewing Section

Based on viewing the news story, what was the agreement on which claimsmaker category each picture should fall (excluding broadcaster pictures)? Total time of claimsmaker shots (Pi = .84). Total number of shots for each claimsmaker (Pi = .87). The simple percentage agreement between coders (*M*, used to calculate the above Pi) for pictures of each claimsmaker type is provided in Table 3-5. The reliability quotients for all the categories fall within the range of accepted reliability. Table 3-5 does indicate the "individual" category may represent an unacceptable agreement, but that was expected due to the ambiguous nature of that category. If claimsmakers were not readily associated with a group, they were placed in this category.

Table 3-5. Visual Coding Agreement Percentage

	Agreement of Total Time of Shots	Agreement of Total Number of Shots
Animal	.82	.82
Researcher	.85	.85
Environmental Act.	.82	.85
Pro-development	.79	.82
Regulator	.76	.97
Legislator	.94	.94
Unaffiliated Individual	.58	.58
Broadcaster	1.00	1.00

Specific Tests for Hypotheses

Data from the abstracts, general viewing, computer-assisted verbal coding and manual visual coding was merged into one data set in SPSS for Windows in order to statistically examine relationships among the variables. The general viewing data included categorical data and was reported as descriptive statistics. The computerized verbal analysis provided interval level scores for each story representing the degree to which the story uses certain words which represent distinct claimsmaker frames. The relationships among these data were examined through t-tests and Chi-square cross-tabulation.

Hypothesis One, which stated that industry/pro-development terms would be used more in the broadcaster text than the environmental terms, was examined through a t-test analysis of the means of pro-development terms and environmental terms in the stories with the level of probability set at $p<.05$. Each story was coded for whether it contained more industry terms or environmental terms in the entire text of the story which included anchor, reporter and all interview segments combined. In Table 3-6 the hypothesis stated that there would be a significantly greater number of stories using more industry terms than environmental terms.

Table 3-6. Hypothesized Claimsmaker Term Usage by Story

	Environ. Terms	Pro-development Terms
Stories	less	**more**

Hypothesis Two, which stated that environmental pictures would be used more often than industry pictures was tested through a t-test of the means of picture total length and frequency with the level of probability set at $p < .05$. Each story was coded for whether it had more environmental pictures or industry pictures. The number of overall shots and the number of more intimate close-up shots were measured. Environmentalist activities were hypothesized to have more close-up shots than industry close-ups. As indicated in Table 3-7 the number of environmental pictures was hypothesized to be significantly higher than the number of industry pictures.

Table 3-7. Hypothesized Claimsmaker Visuals by Story

	Environ. Visuals	Pro-development Visuals
All visuals in Stories	**more***	less
Close-ups in Stories	**more***	less

Hypothesis Three stated that based on the criticism of television's lack of redundancy between visual and verbal messages, most of the network television news stories would have incongruence through **high industry verbal** scores and **high environmental activist visual** scores. Each story was recoded to fall into high industry verbal or low industry verbal categories and each story was also recoded to fall into high environmental visuals and low environmental visuals categories based on a median split.

Using a probability of $p<.05$ in a Chi-square analysis, the high/low industry text with high/low environmental visuals was compared in a two by two cross tabulation (see Table 3-8), where high industry verbal and high environmental visuals was hypothesized to include the highest number of stories.

Table 3-8. Hypothesized Redundancy between Text and Visuals

	High Ind. Verbal	**Low Ind. Verbal**
High Env. Visual	**highest***	low
Low Env. Visual	low	low

The results from the descriptive analysis, t-tests and Chi-square analysis were presented in graphical, tabular, and narrative form. The narrative form involved the qualitative examination of how elements clustered together and apparently influenced other story framing devices. This narrative portion constituted the frame analysis. Representative interview segments, broadcaster text, and visuals were used to discuss how the framing devices measured reveal the way framing devices were selected and emphasized in network stories. A final chapter will discuss the conclusions.

Summary of Steps

The purpose of this study is to identify and examine some of the framing devices used in network television news coverage of a particular environmental issue--endangered species. The data were obtained from network news videotapes and transcriptions of the

audio portion of those tapes. The context for framing analysis has been provided in previous chapters, identifying the growth and development of the environmental movement, historical interest in animal preservation, the legislative history of the ESA, and the news media's growing involvement with environmental issues. Stratified random sampling technique is used to examine endangered species stories on network television news from 1968 to 1997 to achieve a convenient quota of approximately 150 (165 due to rounding). The unit of analysis is the individual news story. The starting and stopping point of this content analysis is somewhat arbitrary, based on the researcher's knowledge of a critical debate period and limitations of archival material availability. The researcher is using all the years available from the Vanderbilt archives. Coding instructions and category development were based on previous similar studies and modification based on the research questions. Intercoder reliability was confirmed by a second coder recoding twenty percent of the material originally coded by the primary coder. The budget was based on the author's leasing the videotapes. The execution of the analysis consisted of the author coding the videotapes during the summer of 1997 and submitting the data set to the statistical software program SPSS for Windows. Narrative description and analysis helped to summarize the findings and draw conclusions for the frame analysis.

Conclusion

This chapter has presented the research questions concerning how the endangered species issue has been framed on network television and the methods used to test the

proposed hypotheses. Television visual content is often unexamined or underexamined in this type of research due to the difficulty in transforming the visual message into textual and numerical information for statistical processes. If the categories are carefully established and remain relatively simple in nature, these visuals can and should be included in any analysis. As Krippendorf (1980) suggests, content analyses answer some questions and provide the basis for the formulation of many more questions. Framing analysis subsequently answers many of the questions raised by the content analysis. Through this study, the process of media framing will be better understood and methods of measuring frames may be improved.

CHAPTER 4

RESULTS

This chapter describes the results of textual and visual analyses of a sample of network television news stories concerning endangered species. Both statistical and qualitative frame analysis techniques were used to determine the degree of claimsmaker evidence in endangered species stories on the evening television news. The text and pictures of endangered species network news stories were examined in detail to determine reference to, reflection of, and possible influence by claimsmakers on this controversial issue. The description of the general nature of the stories is presented first. Then the results of the more specific research questions and hypotheses, which examine relationships of claimsmakers, their words and their pictures, is presented.

The research phases, placed in the context of the claimsmaker involved with each story element, were (a) an examination of the story abstracts and a general viewing of the stories, (b) a computer-assisted verbal analysis, (c) a shot-by-shot examination of the visuals, and (d) a quantitative and qualitative examination and analysis comparing when certain framing devices appeared with others. The analysis of the relationships among the three steps provided a more complete picture of the use of the specific framing devices utilized in media framing.

The computer-assisted verbal analysis helped determine how different claimsmakers utilized distinct words and phrases to describe and define issues. The text of the interviews

with representatives of the different claimsmaker groups in the broadcast stories was isolated and categorized. These words and phrases used by claimsmakers were then compared with those used by anchors and reporters to determine if the view of one particular claimsmaker group or one set of words and phrases was repeated and reinforced by the broadcast media over another.

A similar examination occurred with the visual component of the television news stories as individual shots were examined, timed, and categorized by claimsmaker category. A comparison was then conducted of those stories with a high number of pro-development terms in the text and those stories with more environmental activist pictures to identify the degree of visual-verbal message redundancy, which is a critical concept in the framing of an issue.

The general research question, which is: "How do network news stories on endangered species represent or reflect competing claimsmakers views?" was addressed in the three distinct phases of the research including text analysis, visual analysis, and the relationship between the two. Before an in-depth analysis of text and visuals in the stories is undertaken, a description of the general make-up of the stories is provided.

Story Description

The sample obtained was a stratified, by year, random sample of stories obtained on videotape from Vanderbilt Television News Archives. The sample period was 30 years, specifically from 1968 to 1997. The sample time frame begins several years after the

National Environmental Protection Act (NEPA) was passed in 1966. Several peaks in the coverage of endangered species can be explained by significant developments concerning environmental litigation, legislation and advocacy (see Figure 4-1). These peaks include the first Earth Day in April of 1970, which is representative of a period of enactment of major environmental law (Parlour and Schutzow, 1978; Sachsman, 1993). The sample continues through 1973 when the Endangered Species Act (ESA) was enacted. In 1976 problems arose with dolphins and the tuna industry and at the same time conflict between the interests of the snail darter and completion of the Tellico Dam in Tennessee led to a Supreme Court fight. Two very prominent stories dominated the news in 1989, with the high profile *Exxon Valdez* oil spill in Alaska occurring shortly before the spotten owl conflict. Through the early 1990s the emphasis shifted to salmon recovery and the successful recovery of the bald eagle. Several re-authorizations of the bill occurred in the 1970s and 1980s and another reauthorization debate continues in the 1990s. Random sampling resulted in 165 stories concerning the above mentioned issues and came from 160 different days, as there were 5 days which contributed 2 stories each from different networks during the sample period.

An examination of the titles of the sampled stories (full list of stories is available in appendix) shows that 47 of the 165 stories emphasized wildlife in general and the majority stated the story was about a specific animal which was either on the federal endangered species list, proposed by a group to be placed on the list, or was being taken off the list. The intent of the sample was not to prove that every animal stated in the network stories as endangered was indeed on the federal list.

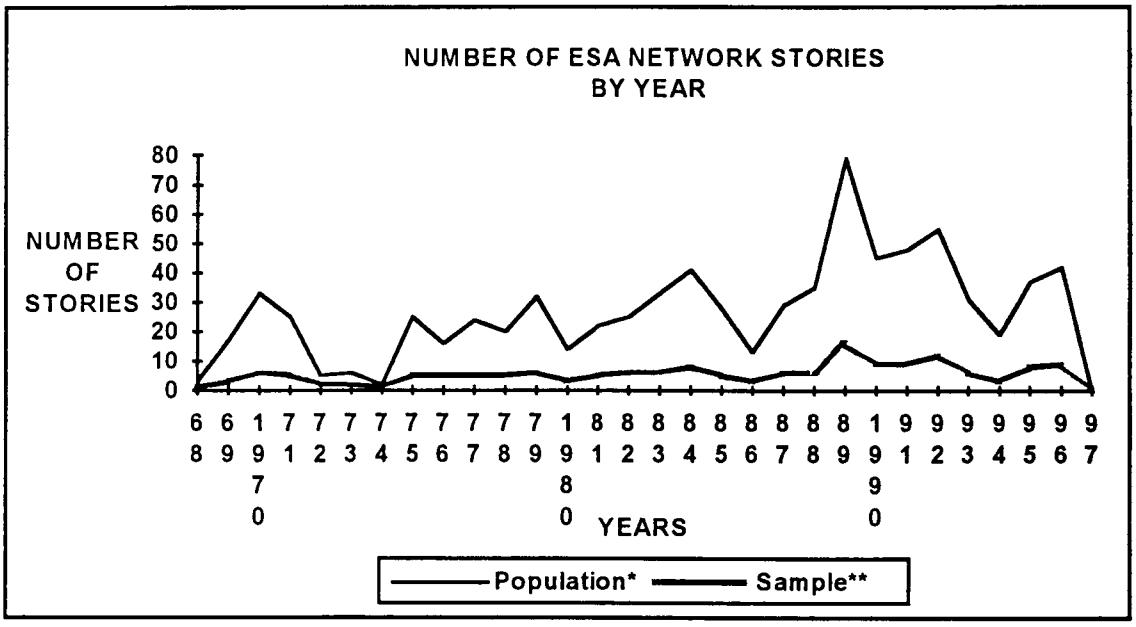


Figure 4-1. Stories by Year
* n = 813, **n =165

Networks

The networks were relatively even in providing endangered species stories in the sample. CBS contributed most of the stories with slightly over a third of the stories with NBC and ABC providing slightly less than a third (see Table 4-1). The stories were generally introduced by the main anchors or weekend anchors, with Cronkite, Rather, Brokaw, and Jennings reading the lead for most of the stories. While 75 different correspondents and anchors reported these stories, Roger Caras of ABC presented 15 of the stories or 9.1 percent of all the sampled stories. Barry Serafin, also of ABC, and Roger O'Neill of CBS both reported nine stories or 5.5 percent of the stories. These most frequently used reporters represent those who cover "beat" areas such as the "environment."

Table 4-1. Network Percentages

Network	Percentage of ESA Stories
CBS	36.4
NBC	32.1
ABC	31.5

Geographic Location

The geographic location which had the highest number of stories reported was the southwest United States with 29 stories or 17.6 percent of the sample, followed closely by the Mountain States and the Northeast (see Table 4-2). When the categories were combined or collapsed, the western United States appeared to be the preferred location for endangered species stories.

Table 4-2. Geographic Location

Location	Percentage of Location
US - Southwest	17.6
US - Mountain States	16.4
US - Northeast	15.8
US - Northwest	12.7
US - Southeast	12.1
US- Alaska and Hawaii	7.3
US - Midwest	6.1
International	5.5
Combined Int. and US	6.6

Story Type

Most of the stories were reporter packages (81.2%) followed by readers (12.7%) and anchor voice-overs (6.1%). The overall mean length for all the stories was 131.33 seconds or 2 minutes and 11 seconds. The longest report was a reporter package of 340 seconds (5 minutes, 40 seconds) and the shortest was an anchor reader of 10 seconds. Three stories were the lead story or first story while 31.5 percent of the stories were the last story in the newscast.

The majority of the stories were about "Wildlife" or "two or more species" (31.5%) followed by stories about "Mammals", "Birds", "Fish", "Reptiles/amphibians" and "Insects, plants or other" (see Table 4-3).

Table 4-3. Animal Category Covered in Story

Animal Category	Percentage of Stories
Wildlife or two or more species	31.5
Mammals	29.7
Birds	27.3
Fish	7.3
Reptiles/Amphibians	3.6
Insects, plants and "other"	0.6

Endangered Species Issues

By far, the leading indicated cause of problems related to endangered species were routine industrial and manufacturing activities (43.6%)(See Table 4-4). "Accidents," such as

oil spills and poisonings, quite often stemming from industrial processes were indicated as the next highest cause of the problems related to endangered species. "Natural" causes such as floods, hurricanes or natural diseases, "habitat destruction", "humans in general", government "over-regulation" and "over-zealous environmentalists" made up the remaining identified categories.

Table 4-4. Causes of Endangered Species Problem or Conflict

Causes of Problem or Conflict	Percentage of Stories
Industrial and Manufacturing Activity	43.6
Accidents	15.8
Natural Causes	12.1
Habitat Destruction	10.9
Humans in General	3.0
Over-regulation	2.4
Over-zealous environmentalists	1.8
"Other"	5.5
No cause indicated	5.8

Each story was also examined to determine which claimsmaker groups disagreed. In 32.7 percent of the stories no disagreement was indicated. These stories often focused on the successful recovery of certain species such as the peregrine falcon and the bald eagle. The largest category, when there was disagreement, was between environmental activists and pro-development interests. This was in 26.7 percent of the stories. Other major categories were pro-development against government regulation (15.2%), environmental activists against the government (10.9%), and inter-agency government disputes (5.5%).

Several other stories focused on businesses combating other businesses and scientists disputing government policies.

The leading category of claimsmaker who "should solve the problem" was the "government" (60.0%). Scientists were indicated as "problem solvers" in 11.5% of the stories, pro-development in 9.1% and in 7.3% of the stories no one was indicated as the problem solver. Also in 7.3% of the stories it was stated that cooperation between several claimsmaking groups or "others" should solve the problem.

Another indicator of claimsmaker involvement in the make up of the news stories was whether the group was used as the first interview in the story. The placement of an interview segment as the first "non-broadcaster" spokesperson lends importance and credibility to that position as one who can describe, explain and define the issue at hand over those who are placed at less important positions further into the news story. Regulators dominated this first interview position (see Figure 4-2).

These descriptive statistics provided the necessary context for analyzing the specific elements in television news stories in more detail. The verbatim text was analyzed first, followed by a shot-by-shot visual examination, then an examination of the possible relationships between the words and the pictures.

Interview Isolation and Categorization

With the understanding of the general nature of the network news stories concerning endangered species, attention was then turned toward the specific framing devices. The first

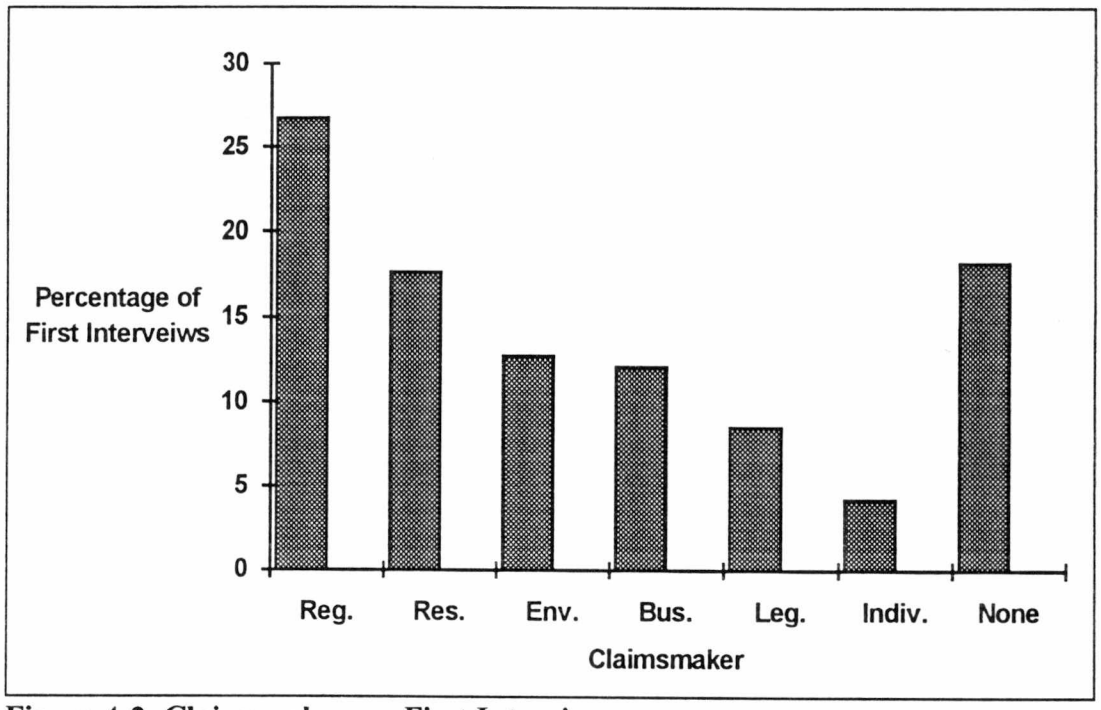


Figure 4-2. Claimsmakers as First Interview

element or framing device examined was the use of specific words in the news story. The first research question asked "What are the key words, terms, and phrases used in the broadcasters' (anchor and reporter) text and in claimsmakers' interview segments in network news endangered species stories? To answer this question, the words used by different broadcasters and claimsmakers were precisely documented and categorized.

The audio portion of the videotapes was duplicated onto audiotape and a computer transcription was created. Several inaudible portions or uncertain words (mainly proper nouns, names, locations and unusual animal names) were double-checked by watching the original videotape in order to provide an accurate transcription of the stories. In the

computer text file labels were included with each paragraph, depending on the speaker or person who uttered and the words, and based on the previously described claimsmaker categories. The transcription of the originally broadcast words combined with the labeling terms produced a computer text file of approximately 142 single spaced pages with 64,167 words made up of 285,996 characters in 1704 paragraphs. With the text file completed, the job of sorting and searching for words attributed to certain claimsmaker groups began. The program sorted and counted paragraphs and words connected with each "speaker" or claimsmaker. That step resulted in information seen in Table 4-5. The 176 paragraphs provided by anchors indicates that in 11 of the 165 sample stories, the anchor read a "tag" or a related paragraph at the end of story rather than moving directly on to the next unrelated story. In 79 of the stories, reporters were seen on-camera in "standups", talking into the camera usually from a field location. Table 4-5 indicates that regulators were used more than any other claimsmaker group for interviews. This is not unexpected as the Fish and Wildlife Service is charged with enforcement of the Endangered Species Act.

The relationship of interest for this study is the use of pro-development representatives compared to environmentalists. Pro-development spokespersons were used more times than environmentalists, but that apparent advantage is counter balanced by environmentalists who were used as interviewees in a higher percentage of the stories than were pro-development spokespersons. Environmentalists were used as interviewees in 35.2 % of the stories while pro-development representatives were used in 26% of the stories. And while environmentalists were used in more of the stories, their mean words per

Table 4-5. Source of Text Words and Paragraphs

Speaker	# of words	% of words	No. of Paragraphs	% of Paragraphs	Mean # words per paragraph	# of stories where terms found	% of stories where terms found	% of claims-makers / out of 477
Anchors	10,713	16.7	176	11.1	63.1	165	100.00	
Reporter's narration	35,426	55.2	728	45.9	55.5	134***	81.2	
Reporter standup	3,682	5.7	79	4.9	48.1	78	47.3	
(Total broadcaster)	(49,821)	(77.6)	(807)	(50.9)	(55.6)	(165)	(100)	
Regulator	3,694	5.7	120	7.6	32.5	74	44.9	25.1
Pro-development	2,946	4.6	107	6.7	29.6	43	26.0	22.4
Environmentalist	3,140	4.8	101	6.4	33.0	58	35.2	21.1
Researcher	2,708	4.2	85	5.4	33.9	39	23.6	17.8
Legislator	1,061	1.6	34	2.1	33.8	20	12.1	7.1
Individual	797	1.2	30	2.0	30.5	18	10.9	6.2
total	64,167	100**	1583*	100		165	100	100

*Less than the 1704 reported above because case identifiers and other computer notations were counted as paragraphs.
**Not 100 due to rounding.
*** Consequently, 31 stories or 18.8% did not have reporter narration, but where read by anchors.

interview or paragraph was higher than the pro-development claimsmaker, 33 words per paragraph to 29 words for pro-development. This resulted in environmentalists having a greater total number of words than pro-development sources.

Verbal Analysis - Research Question Two and Hypothesis One

In order to test Hypothesis One, which stated that the number of **industry/pro-pro-development terms** used in the reporter/anchor text will be will be significantly higher than **environmentalist terms** in the anchor/reporter text, the VBPro program produced a list of the most frequently used words in all the claimsmaker paragraphs. From the list of all the most frequently used terms generated by VBPro, 119 of the most "meaningful" words were selected along with the six tags for claimsmakers. These 125 terms were then re-submitted to VBPro and coded according to how frequently they appeared in each story. The results of that file were then submitted to a hierarchical cluster analysis in SPSS to determine which words fell together or tended to be used together. The resulting dendrogram indicated branches with the claimsmakers terms grouped with words most often associated together (See Figures 4-3 and 4-4). The words that tended to cluster with claimsmaker tags are listed in Table 4-6. These words were designated as the "verbal frame" of the respective claimsmaker. This designation did not claim exclusive use of these words by a particular group, but that these claimsmakers tended to use these words more often than the other groups in describing and discussing the endangered species issue.

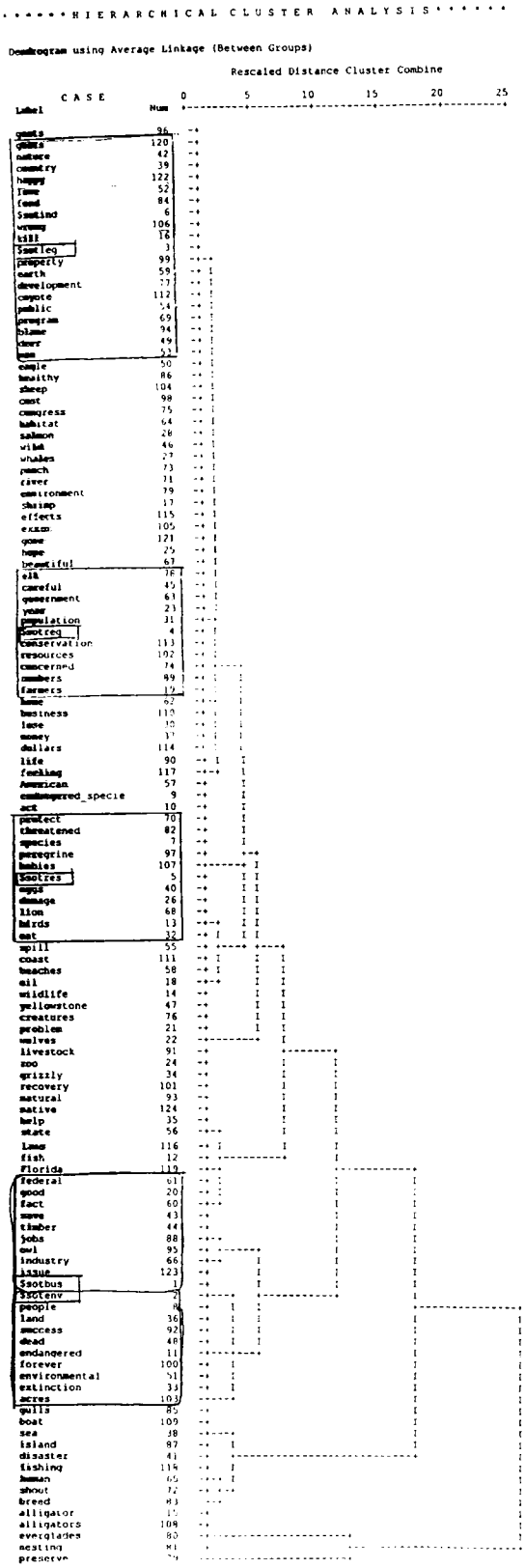


Figure 4-3. Dendrogram of Claimsmakers with Associated Terms

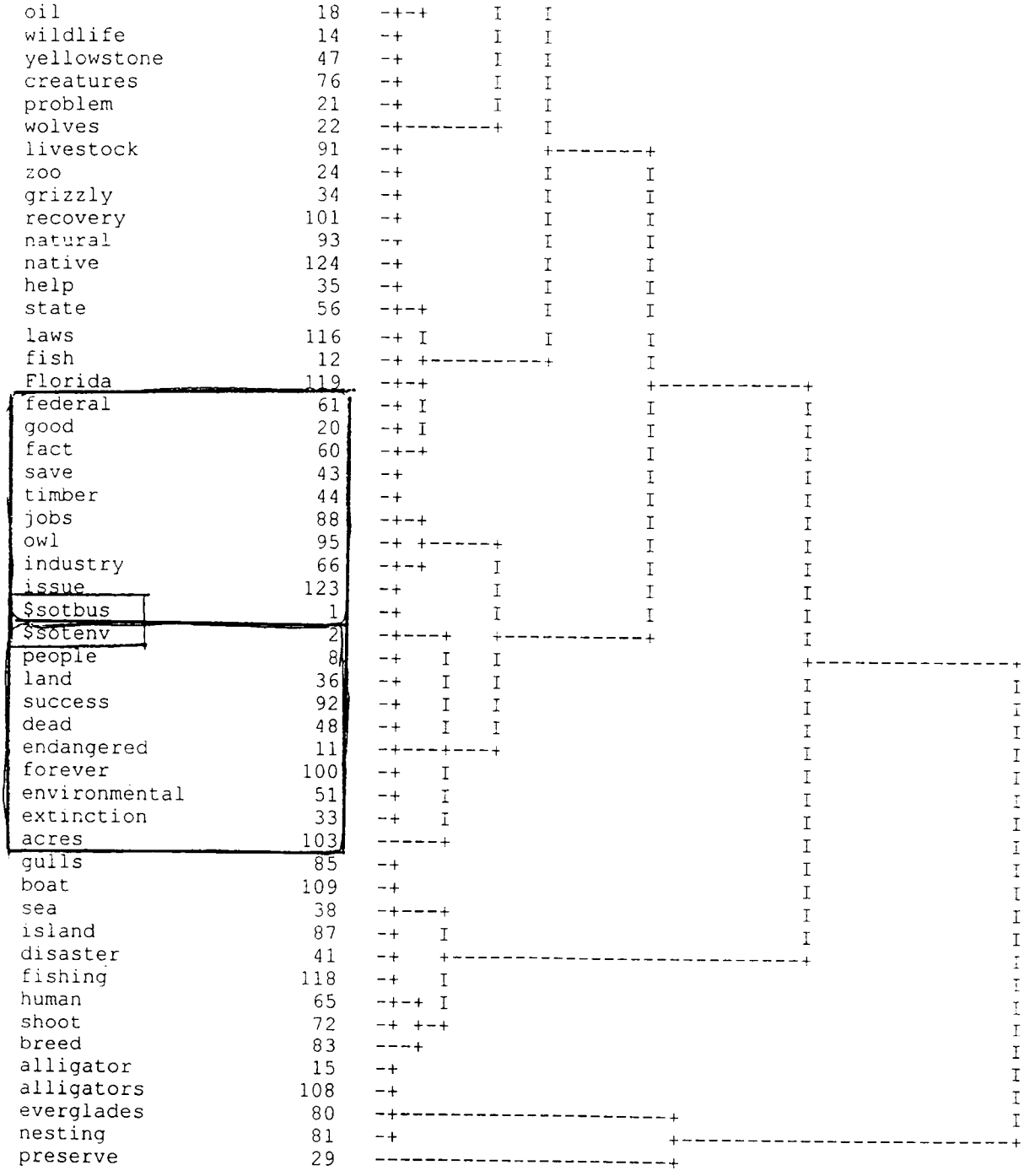


Figure 4-4. Detail of Dendrogram Showing Proximity of Environmentalist and Pro-development Terms

Table 4-6. Claimsmaker Use of Words

Environmentalists/Pro-development (shared terms)		**Researcher**
people land dead endangered forever environmental extinction acres	issue industry owl jobs timber save fact good federal	babies eggs damage lion birds peregrine species threatened protect
Regulator	**Legislator/Administrator**	**Individual**
population conservation resources concerned numbers year government careful elk farmers	kill property earth development coyote public program blame deer man	food love happy country nature goats

The common or shared usage of similar terms by environmentalists and pro-development claimsmakers presents interesting questions. If they tend to use the same words, do they use them in similar or different ways? The statement of one environmental claimsmaker seems to capture the intent of usage of three shared terms for environmentalists,

> "**People** cannot destroy their **land** without any regard for what it is going to do to **endangered species** who also use that **land**."

The response by a pro-development representative in the same story also indicates the general use of those terms by industry.

> "Well , if you don't want a bunch of feds telling you how to manage your **land**, the incentive then is to get rid of the habitat so a threatened or **endangered species** won't take up residence on your **land**.

As indicated in the quotes above, references about "people" by environmentalists suggest they are ignorant, harmful and need to be educated. Pro-development references to "people" imply that people are the victims of impacts from the Endangered Species Act. Broadcasters tend to reflect the former. "People" need to be educated (see Table 4-7). Two other shared terms were selected for examination, "Endangered Species" (see Table 4-8) and "Land" (see Table 4-9). Under this examination, the broadcaster segments tended to reflect the definition and use of each word consistent with the environmentalist use of each particular word.

Table 4-7. Environmentalists, Pro-development and Broadcaster use of the Term "People"*

Environmentalist (Emphasis on people who are ignorant, need to be educated and are damaging the environment.)	Pro-development (People are victims and suffering under the endangered species law)	Broadcaster (Used similarly to environmentalists)
(The availability of the poison 10-80) It's in the hands of everybody, even some of the towns police department have got it and its in the hands of **people** who have no idea of what the affect of poison is. (NBC 12/14/71)	(In reference to the Tellico Dam conflict with the snail darter) We need that dam. The endangered species here is the working **people**. I'm not overly concerned about a small fish that is not doing anyone any good anyway. (NBC 2/18/77)	The eagles are safe from man here in the park, but outside, the birds remain vulnerable to pesticides and traps and **people** who don't care about national symbols. (CBS 11/16/83)
People who wouldn't dream of picking up a rifle and shooting an elk will build a summer home on an elk winter range and indirectly kill dozens of elk over a long span of time. (ABC 8/9/83)	The fishing industry is just the lifeline to this town, you know if you put the **people** out of business in the fishing industry, I mean, the town is just dead. (NBC 10/10/89)	But not everyone thinks Big Foot is such a big joke. Out here in Eastern Washington a number of **people** still think Sasquatch still roams these woods. (CBS 2/6/96)
We don't want to put **people** out of work. We don't feel that we are. There are a lot of things that can be done to sustain jobs in the timber industry(CBS 3/22/89)	(In the logging northwest) Those **people** who were born here and raised here and now they don't have a job. And the way things are going here they're not going to have a job because they can't find them anywhere else. (CBS 3/22/89)	The seals never returned, these sea lions took their place among the rocks and the birds have survived because the U.S. Coast Guard built a small lighthouse here, just enough protection to keep the **people** away. (CBS 12/25/70)
It saddens me to think that we worked so hard to try to maintain animals including prairie dogs and then these **people** come out here and shoot them like they don't have any feelings. (NBC 7/14/90)	**People** don't realize that they're (wolves) really an ornery kind of a creature. They want to go out and kill livestock. (CBS 5/27/90)	It's a new twist this year by the American Cetacean Society (promoting whale watching for school children) trying to preserve whales around the world and despite a few sea sick dissenters the society maintains its theory works that if **people** just see whales and try to understand them they will love them.. (CBS 1/15/73)
People cannot destroy their land without any regard for endangered species who also use that land. (ABC 4/17/95)		

* Parenthetical information added for context

Table 4-8. Environmentalists, Pro-development and Broadcaster use of the Term "Endangered Species"*

Environmentalist (Emphasis on the law used to protect animals and that law is under attack)	Pro-development (Questioning whether the law is effective, problems dealing with it. trying to get around ESA)	Broadcaster (Used similarly to environmentalists)
This is the heart of the **endangered species** act (reintroduce wolves to southwest). If they are committed simply to walk away from recovery claims that they've developed there's no teeth in the endangered species act isn't worth anything. (CBS 5/27/90)	It's a dilemma for the public, it's a dilemma for Congress (Tellico Dam vs. snail darter). I think they will have to address the question of invested money in a public project and the saving of **endangered species**. (NBC 2/18/77)	The administration also proposed changes in the **endangered species** act in order to allow more consideration to be given to economic impact. (CBS 6/26/90)
I think this was a little bit of a situation (cooperation with developers) where nobody wanted to be the bad guy. We didn't want the **endangered species** act to stand against economic progress. (CBS 2/9/82)	We need that dam (Tellico). The **endangered species** here is the working people. I'm not overly concerned about a small fish that is not doing anyone any good anyway. (NBC 2/18/77)	(About Interior Secretary Manuel Lujan) He's calling for weakening laws protecting animals, **end. species**.(CBS 5/11/90)
President Bush has declared war on the **endangered species** act. We are very disturbed. (CBS 6/26/90)	We just had to face up to the fact that we did have rare and **endangered species** and had to deal with them the best way we knew how (cooperation with environmentalists). (CBS 2/9/82)	And on Assignment Earth tonight, we take a look at the battle to **save endangered species**. (NBC 3/27/91)
People cannot destroy their land without any regard for what it is going to do to **endangered species** who also use that land. (ABC 4/17/95)	I had some problems with the **endangered species** law. They (reintroduced wolves) can be down here killing some of my livestock right in the corral and I can't touch them. (ABC 11/19/92)	But all of that takes money in an economic climate that makes it likely that more **endangered species** will disappear before a solution is found. (ABC 12/14/91)
		With their release back into the wilds in Wyoming this week the **endangered species** act will protect the black footed ferret from man's further encroachment. (NBC 9/3/91)

* Parenthetical information added for context

Table 4-9. Environmentalists, Pro-development and Broadcaster use of the Term "Land"*

Environmentalist (Emphasis on the idea the federal control of land is OK and that federal land belongs to all. Land is a victim.)	Pro-development (Emphasizing the idea that too much federal land and federal regulation of private land is bad.)	Broadcaster (Used similarly to environmentalists)
The coyote was here, and our wildlife was here before the sheepmen came. Why then go kill everything off so that he can make individually more profit and the beauty of the **land** is destroyed forever for everybody. (NBC 12/14/71) This would have opened up the door to the massive usage of some extremely dangerous and some very, very toxic chemicals compound 10-80 which would have been devastating to the wildlife on the western public **lands**. (CBS 1/3/77) But half of Wyoming's federal **land,** it belongs to everyone. This is your place, this is your ranch to come and sit around on and rejuvenate yourself. (ABC 8/9/83)	The issue is to take more and more **land** out of the free enterprise system and to forever preserve it. We are saying enough is enough. (CBS 3/22/89) I'm simply opposed to the environmental politics dictating that more **land** be owned by the government. (CBS 3/22/89) (A timber company spokesperson) We have twenty-eight owl circles (designated spotted owl habitat) affecting company **lands**. (ABC 4/17//95)	... to conquer the **land** and use it, men have already virtually eliminated the wolf, grizzly and mountain lion. (NBC 12/14/71) Not only for the sake of the snail darter, but also to try to protect agriculture and timber **land** which has been destroyed by TVA. (NBC 2/18/77) (The Indians) say this **land** is our dish you're welcome to eat from it but please don't break it. (ABC 7/21/80) (After Mt. St. Helen's eruption) The **land** and the wildlife are now returning to normal as rich and beautiful as ever. (NBC 5/14/81) That means that the government does have the right to restrict logging...even if it is on private **lands**. (ABC 6/29/95)

* Parenthetical information added for context

Frame Terms Derived from Previous Studies

To check the external validity of the finding that environmentalists and pro-development spokespersons use the same terms in broadcast stories, a set of terms culled from print publications in previous was used. Two related studies, which also used the VBPro frame analysis process, examined specific term use by environmental groups and pro-development-related groups. Riechert (1996) examined news releases from conservation and property-owner advocacy groups such as the National Audubon Society and the American Farm Bureau Federation and found significant differences in specified frame terms between the two news releases from the two types of "stakeholders." She used the titles "conservation" and "property-owner" to distinguish the two frames. For use in this study, the property-owner designation was considered synonymous with pro-development.

In a similar study, which was a pilot for this study, the author sampled specialty publications or magazines from conservation groups and pro-development-related groups such as *Sierra* and *National Forester* respectively and also found distinct usage of specific terms by the different claimsmakers (Smith, 1995b). The two sets of terms from both studies appear qualitatively different from each other depending on the originating claimsmakers (see Table 4-10).

These lists were submitted to VBPro and coded for usage by environmentalists interviews, pro-development interviews, and broadcaster segments. T-tests were conducted to determine a difference in the means of environmental terms and pro-development terms.

Table 4-10. Alternative Terms from Previous Studies

Smith's Terms		Riechert's Terms	
Conservation	Pro-development	Conservation	Property
conservation	jobs	River	Farm
land	job	Natural	Farmers
lands	forest	Wildlife	Property
people	forests	Species	Agriculture
state	million	Conservation	Regulations
states	timber	Watershed	Legislation
wildlife	management	Everglades	Private
public	plan	Endangered	Landowners
wilderness	plans	Society	Compensation
development	acre	Project	Agencies
group	acres	Protect	Support
groups	growth	Bird	Legislative
mining	forest service	Bay	Wetland
environmentalists	owl	Acres	Statewide
world	owls	Threatened	Definition
local	agency	Birds	Agriculture
sierra	tree	Habitat	Owners
right	trees	Fish	Ranchers
rights	washington	Ecosystem	Supports
environment	northwest	Migratory	Lawmakers
future	service	Ecosystems	Balance
movement	resource, resources	Area	Court
country	pacific	Rare	Issue
society	northern	Earth	State
money	paper	Forests	Congressional
nature	ecosystem	Preserve	Business
fact	ecosystems	Restore	Laws
facts	impact, impacts	Research	Law
political	oregon	Protected	
life	forestry		
human	logging		
humans	products		
earth	product		
	sale		
	sales		
	research		

In the comparison of terms from the Riechert study the environmentalist interview segments were seven times more likely to include environmentalist terms over pro-development terms. Even in the pro-development interviews, the environmentalist terms were used three times more than pro-development terms and the broadcaster segments used environmental terms four times more than pro-development terms. In all verbal aspects, environmental terms were found to be used significantly more than pro-development terms (see Table 4-11) The pattern was similar in the terms derived from the Smith study. In the environmentalist interview segments the environmental text frame terms were used three times more than pro-development terms and in both the pro-development interviews and broadcaster segments, the environmental terms were used twice as often as pro-development terms (see Table 4-12). The similar results from the two "print" derived lists validated the idea that both the environmentalist and the pro-development interview segments, as well as the broadcaster segments, tended to use more terms and words from the environmentalist frame list.

A final test was conducted by constructing a "composite" list of frame terms. The two lists from both the Riechert and Smith study were combined into longer lists of approximately 60 words for each claimsmaker (see Table 4-13). Some words were eliminated when they appeared on both the environmentalist and pro-development lists. These lists were tested with all cases with all the words; broadcasters and claimsmakers. Once again, the use of environmentalist terms was significantly higher than the use of pro-development terms (see Table 4-14).

Table 4-11. Paired Sample t-test of Use of Terms from Riechert Study

Spokespersons	Key Terms from Riechert				
	Environ. Mean	Pro-Dev. Mean	Mean Dif.	t	Significance (one-tailed)
Environmentalist Interview Segments n = 105, df = 104.	.7059	.0981	.6078	4.620	.000*
Pro-development Interview Segments n = 102, df = 101	.4476	.1333	.3143	3.489	.0001*
Broadcaster Segments n = 828, df = 827	1.2862	.3043	.9819	16.765	.000*

* p <.001

Table 4-12. Paired Sample t-test of Use of Terms from Smith Pilot Study

Spokespersons	Key Terms from Smith				
	Environ. Mean	Pro-Dev. Mean	Mean Dif.	t	Significance (one-tailed)
Environmentalist Interview Segments n = 105, df = 104	.6078	.1667	.4412	4.591	.000*
Pro-development Interview Segments n = 105, df = 104	.4762	.2381	.2381	2.667	.0008*
Broadcaster Segments n = 828, df = 827	.9118	.5278	.3841	7.179	.000*

* p <.01

Table 4-13. Composite List of Claimsmakers Terms

Environmental Terms		Pro-development Terms	
area	migratory	agencies	oregon
bay	mining	agency	owl
bird	money	agriculture	owls
birds	movement	balance	owners
conservation	natural	compensation	pacific
country	nature	congressional	paper
dead	people	court	plan
development	political	definition	plans
earth	preserve	farm	private
endangered	project	farmer	product
environment	protect	federal	products
environmental	protected	forest service	property
environmentalists	protection	forestry	ranchers
everglades	public	growth	regulations
extinction	rare	impact	research
fact	right	impacts	resource
facts	rights	industry	resources
fish	river	issue	sale
forever	sierra	job	sales
future	society	jobs	save
group	species	landowners	service
groups	state	law	state
habitat	states	lawmakers	statewide
human	threatened	laws	support
humans	watershed	legislation	supports
land	wilderness	legislative	timber
lands	wildlife	logging	tree
life	world	management	trees
local		million	washington
		northern	wetland
		northwest	

Table 4-14. Paired Sample t-test of Use of Terms from Composite List

Spokespersons	Key Terms from Composite List				
	Environ. Mean	Pro-Dev. Mean	Mean Dif.	t	Significance (one-tailed)
By case (or stories) with all verbal portions combined. n= 165, df = 164.	14.2545	5.5515	8.703	13.592	.000*

* p <.001

Through this series of frame term comparisons, there is strong evidence, contrary to the hypothesis, that the verbal portion of the network news stories about endangered species stories is dominated by environmental frame terms. This applies not only to the utterances of reporters and anchors, but also to the interview segments by other claimsmakers. In other words, the pro-development interview segments are also comprised of environmental terms. While there may be negation and distinct meanings with the use of those same terms, nevertheless, in network news stories, pro-development spokespersons appear to use similar language to environmentalists.

With an understanding of the verbal usage in these stories, attention was then focused on the pictures appearing in the stories.

Picture Analysis - Research Question Three and Hypothesis Two

The second research question asked "What film and video pictures are typically used in network news stories concerning endangered species?" To answer this question the

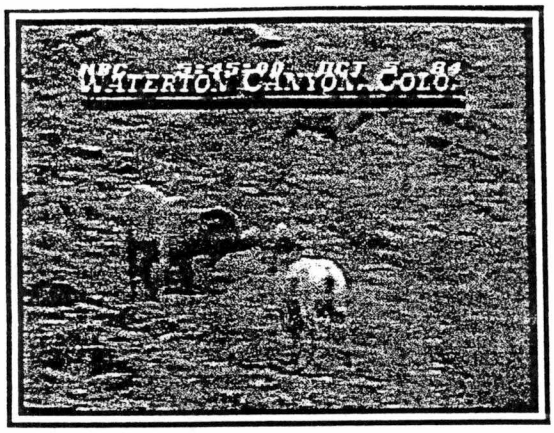
videotape stories were watched and each shot was coded by type, number and length of shot. The categories were close-ups, medium shots, and wide-shots in relation to the claimsmaker shown or being discussed in the story. Two other categories of shots, in addition to the six claimsmakers were animal shots and broadcasters shots.

Pictures of animals were coded in the animal category if they were not directly associated with other claimsmaker categories. Many animals were directly associated with researcher activities and were thus coded under researcher pictures. The "animal" pictures ranged in subject from the largest whales to small insects. Obviously there may be different technical challenges in getting a close-up of a grizzly bear and a close-up of a snail. Consequently, the close-ups in the animal category were on average less (5.93 seconds) than the medium shots (15.45 seconds) and the wide shots (14.88 seconds) (see Table 4-15). Often the wide shots of animals included spectacular scenery such as sandhill cranes silhouetted against a Platte River sunset in Nebraska or gray whales spouting off of the California coast (see Figure 4-5).

Researcher pictures were coded as any activity stated as research or study. These included research ranging from oil spill remediation to frozen tissue storage for genetic examination. This research was conducted at federal, state, and private game reserves, veterinarian work in injured animal rehabilitation, autopsies on dead animals, and research conducted at zoos. Fish and Wildlife Service representatives were placed in either

Animal Wide Shots - most used

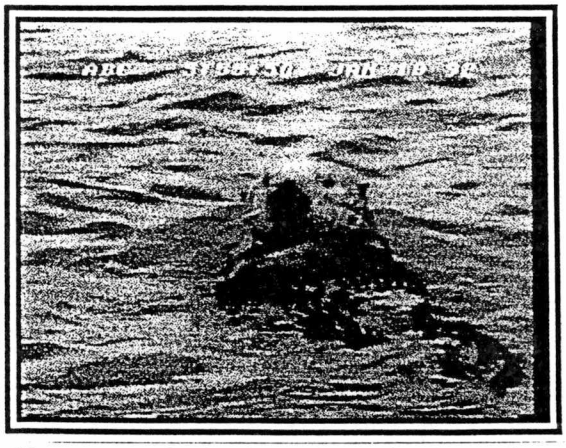
Wide shots of animals in their environment were quite common. This was a special segment on the effect of the *Exxon Valdez* oil spill on wildlife (ABC, 5/9/89).



Rocky Mountain Big Horn Sheep on mountain slopes for a story on successful research and transplantion of herds. (NBC, 10/5/84).

Animal Close-ups - less common

Close-ups of animals were powerful images. The spotted owl became an icon representing regulation that caused the loss of jobs in the timber industry (CBS, 5/26/90).



Close-ups of "charismatic" animals such as the California Otter (ABC, 1/18/92) and other majestic animals such as grizzly bears and wolves were compelling when used.

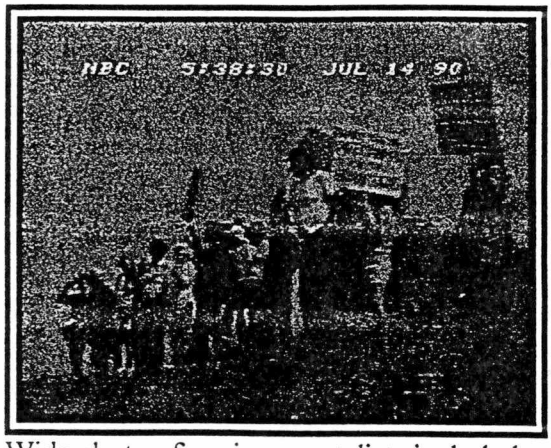
Figure 4-5. Typical Animal Pictures

researcher or regulator category depending on the emphasis of the work for that particular story. Because of the nature of documenting research, most of these pictures tended to be close-up shots, showing the details of the researcher's work. The mean length of researcher close-ups was 6.37 seconds compared to medium shots at 2.99 and wide shots at 1.24 seconds.

Environmentalists' pictures included any activity described as part of environmental or conservationist efforts. These pictures included several "protest" scenes, volunteers helping sick or injured animals, bird watchers, and other environmental advocacy activities. Many of these pictures were the close-ups of individuals in interviews because it is not as easy to document wider shots on videotape of people engaged in the "process of preservation." Similar to the shot means for researchers, environmentalists had a higher mean with the close-ups (6.27 seconds) than with medium shots (2.36 seconds), and with very few wide shots with a mean of only .73 seconds (see Figure 4-6).

Different than environmental activities, it may be easier to document pro-development activities on television through wide shots. Wide shots place pro-development routines and procedures in context. Many "business" shots were aerial shots of oil spills, logging activities, whaling and fishing boats and dams. Other shots included exterior shots of buildings and factories. The close-up shots of individuals and activities, while they averaged higher than environmental and researcher close-up shots, were fewer compared to the medium and wide shots. Close-up shots averaged 7.04 seconds in length while, medium shots averaged 6.83 and wide shots 9.6 seconds (see Figure 4-7).

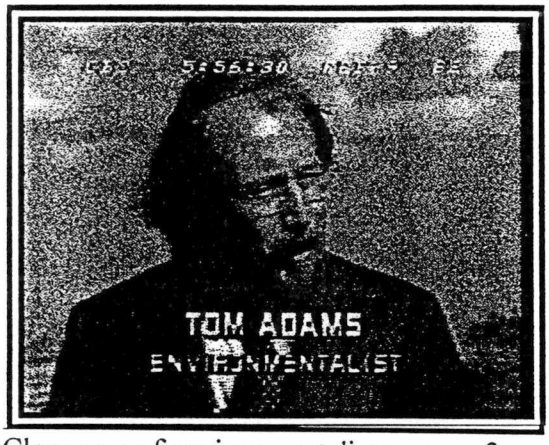
Environmentalist Wide Shots - rare



Wide shots of environmentalists included protests. This group protested an organized prairie dog hunt (NBC, 6/14/90). Environmentalists were often portrayed as "volunteers" attempting to help animals from disasters.

Other wide shots which involved environmentalists tended to include groups of people. In this case volunteers attempt to rescue deer from possible drowning in the rain-soaked Florida Everglades (ABC, 6/19/88).

Environmentalist Close-ups - common



Close-ups of environmentalists were often interviews. This environmentalist helped negotiate an agreement providing both housing developments and butterfly habitat (CBS, 2/9/82).

Close-ups of environmentalists attempting to help animals suffering from oil spills or other disasters were much more common than wide shots. This woman cleans oil from a bird (CBS, 1/10/89).

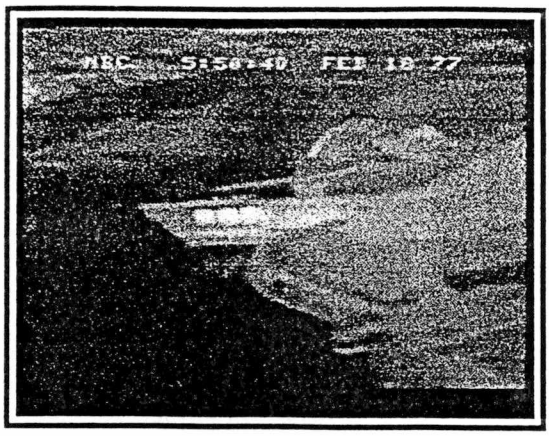
Figure 4-6. Typical Environmentalist Claimsmaker Pictures

The regulators were used more often than any other group for interviews, and were presented most often in close-ups (8.4 seconds average) with medium shots at 4.3 seconds and wide shots at a mean of 2.5 seconds. Quite often these were US Fish and Wildlife representatives, while other regulators included wildlife refuge managers and national park employees. Legislators/administrator had the lowest mean time with 2.6 seconds of close-ups, 0.723 seconds of medium shots and 0.139 seconds of wide shots.

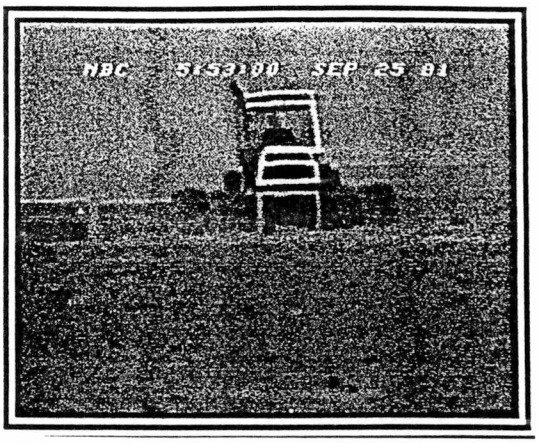
The shots coded as "individuals" were those shots which were not directly associated with any of the other claimsmaker categories. The shots of broadcasters included the lead-in statements from the anchor desk, which averaged 18.75 seconds. Reporters were also seen in the stories in the form of stand-ups in the field, which averaged 7.11 seconds, and reporters listening to interviewees or looking at something pertinent to the story (see Figure 4-8).

The length of time for all the shots and the number of shots were totaled for each category in order to provide a summary of patterns of pictures used in the stories. The mean length of the different types of shots shows a tendency to use more animal category pictures than any other type of picture. Each story had an mean length of 36 seconds of animal shots and a mean of 7 shots of animal pictures. The next highest-used category of picture type were the pro-development shots with a mean of 23 seconds across all stories. The regulator category followed with means of 15 seconds of pictures in 2.7 shots per story. Research, environmentalists, legislators and individuals followed in picture use (see Table 4-15).

Pro-Development Wide Shots - most used



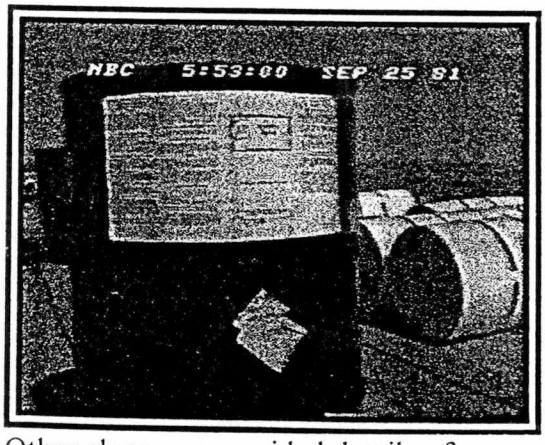
Wide aerial shots were common. TVA's Tellico Dam, which when filled, flooded the habitat of the endangered snail darter (NBC, 2/18/77). Many business shots did not show people.



Wide shots of farming and ranching operations were common (NBC, 9/25/91). Other representative business wide shots included oil spills and clear-cut timber operations.

Pro-Development Close-ups - less common

Close-ups of workers such as this drill rig operator were not as common as wide shots of business operations (ABC, 4/18/72).

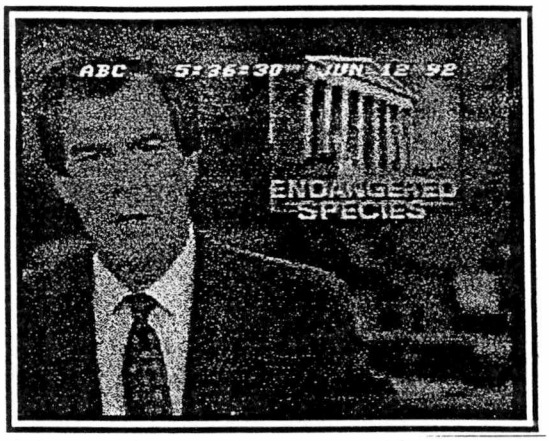


Other close-ups provided details of business activity threatening wildlife such as these containers of the herbicide Endrin which, after it ran into rivers and streams, contaminated ducks (NBC, 9/25/81).

Figure 4-7. Typical Pro-Development Claimsmaker Pictures

Anchors at Studio Desk

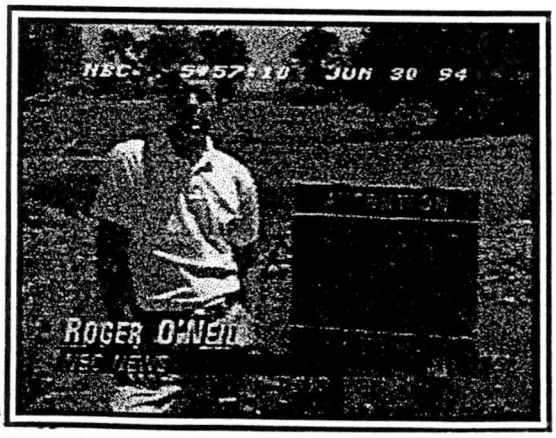
Every story contained some form of anchor announcement from the studio. Walter Cronkite announces the 1969 Santa Barbara oil spill (CBS, 1/31/69).



Most anchors had some graphic accompaniment. Peter Jennings announces a Supreme Court development concerning the spotted owl and the timber industry. (ABC, 5/12/92).

Reporters in "Stand-ups" on-location

From an airport customs office, Roger Caras shows a pamphlet about importation of endangered species (ABC, 11/26/76). Caras reported more endangered species stories than any other reporter.



Based out of NBC-News' Denver bureau, Roger O'Neil covered endangered species stories in the west (NBC, 5/30/94).

Figure 4-8. Typical Broadcaster Shots

Table 4-15. Mean Length and Number of Shots of Animals and Claimsmaker Activity

	Animals	Pro-dev.	Environ	Regulat.	Research	Legislator	Ind.	Broad-caster
Mean shot time per story in seconds	36.255	23.479	9.367	15.327	10.600	4.182	3.400	26.294
Mean number of shots per story	7.012	5.346	1.636	2.709	1.994	0.582	0.849	1.806

To examine the use of certain types of claimsmaker pictures, Hypothesis Two was proposed: The number of shots and total length of time of **environmental pictures** used in the video portions of the news stories will be significantly higher than **industry/pro-development pictures** in the video portions. This was tested through a t-test comparison of the means on the three of the types of pictures portraying the two claimsmakers. There was a significant difference between the environmentalists shots and the pro-development shots but it is in the favor of pro-development shots (see Table 4-16). Overall, there were over three times as many pro-development shots as environmental shots. This difference was significant in all shot categories except the close-up. There appeared to be a tendency by the

Table 4-16. Paired-Sample t-test of Environmentalists and Pro-development Picture Type

Picture Type	Picture Subject				
	Environ. Mean	Pro-dev. Mean	Mean Dif.	t	Significance (one-tailed)
Close-ups - Time in secs.	6.273	7.042	-.768	-.614	.290
Close-ups - Number	.975	1.478	-.497	-2.102	.013*
Medium Shots - Time	2.358	6.830	-.4.473	-3.887	.000**
Medium Shots - Number	.503	1.764	-1.261	-4.366	.000**
Wide Shots - Time	.733	9.606	-8.873	-7.241	.000**
Wide Shots - Number	.158	2.109	-1.952	-6.074	.000**
Total Shot Time	9.364	23.479	-14.115	-4.959	.000**
Total Number of Shots	1.636	5.346	-3.709	-5.369	.000**

* p <.05, **p<001, All paired-sample tests had df = 164, n = 165.

networks to show more pro-development pictures than any other single claimsmaker category. There are similar times and numbers of close-ups between environmentalist and pro-development claimsmakers, but the proportion seen between close-ups and wide shots of the two claimsmaker groups indicates the real difference is in the number and length of wide shots.

The statistical significance found in these stories is not in the hypothesized direction. There are significantly more pro-development-related shots and the shots are significantly longer in all areas except where no significance was found in the "close-up" times comparison. Consequently, on that level, Hypothesis Two is rejected.

Visual/Verbal Redundancy - Research Question Four and Hypothesis Three

The fourth research question and the corresponding hypothesis address the relationship between claimsmaker-related words and pictures in the news story. The research question asks "What is the relationship between verbal messages and visual messages in network news stories concerning endangered species?" As already demonstrated in previous sections, the dominant verbal message in stories reflected the environmentalist frame. The dominant visuals portrayed pro-development activity. The original hypothesis proposing to test the visual-verbal redundancy stated, that based on the research showing there is little redundancy between visual and verbal messages in network television news, most of the network television news stories about endangered species news will have **high industry verbal** scores and **high environmental activist visual** scores.

To test this hypothesis, stories were recoded into "environmental term" stories and "pro-development term" stories depending on whether the story contained more claimsmaker "verbal" terms than another. The stories were also recoded into "environmental picture" stories or "pro-development picture" stories depending on which stories contained more pictures of the particular claimsmaker than another. This was based on a newly computed variable which multiplied the picture total time for each claimsmaker by the total number of pictures for each claimsmaker. A 2 x 2 cross tabulation was conducted to determine the relationship between environmental words and pictures and pro-development words and pictures. The results show most of the stories (65%) used environmental words with pro-development pictures (see Table 4-17). The pro-

development pictures with environmental words overwhelmed the other categories. Other categories of interest were that 93 percent of the stories fell into the "more environmental words" category while no stories were recorded in the "more pro-development words" and "more environmental pictures" categories. There was an obvious inclination of use the pro-development pictures with the environmental words.

Table 4-17. Pictures by Words

	More Environmental Pictures	More Pro-development Pictures	Total
More Environmental Words	28 27.5%	65 63.7%	93 91.2%
More Pro-development Words	0* 0%	9 8.8%	9 8.8%
Total	28 27.5%	74 72.5	102 100%

df = 1 , Chi-Square = 3.735, $p < .05$, n = 102
* One cell did not have the minimum expected count.

The intent of this hypothesis was to test the lack of verbal and visual redundancy, but the actual findings are opposite of the hypothesized claimsmaker involvement. The stories have high environmental verbal scores and high industry visuals. While the hypothesis is not supported, the results do confirm a lack of redundancy between the visual and verbal message.

The patterns revealed in the visual-verbal redundancy examination and the isolated verbal and visual analysis indicated there was a tendency by the networks to show more pro-development wide-shots while using environmental terms in the text. When environmentalists were shown, the shots were often close-ups and there was more personal information provided. With this pattern identified, the stories were re-examined for the tendency to de-personalize those in pro-development or business situations. Evidence supporting this trend emerged in a story about cooperation between businesses and environmentalists to develop a plan for grizzly bear habitat (ABC, 4/22/96). Environmentalists were individually named, along with their group affiliation, while pro-development representatives were simply identified as lumbermen. A segment of that script is provided below.

Video Portion	Audio Portion
Wide shot of group around table Close-up of Tom France Close-up of Hank Fisher Medium shots of others around table	REPORTER: Trying to avoid a costly and contentious battle over the grizzly, Tom France of the National Wildlife Federation and Hank Fisher of the Defenders of Wildlife actually joined forces with their traditional foes, the timber industry. Although the lumbermen really don't want the bears, they fear it might be futile to fight the government plan in court .
Interview close-up of businessman. (no graphic to provide identification)	PRO-DEVELOPMENT INTERVIEW: We have a problem. We are not going to win this battle by just saying no.
Wide shot of people around table looking at maps.	REPORTER: So the two sides came up with a radical notion .Instead of waiting for the government to force its plan on local residents, they'd seize control and come up with a plan of their own.

In these three paragraphs, as in others, "battle" language prevails. The use of terms describing battle accentuates the impression that pro-development supporters were on the defense. The battle terms included: costly and contentious battle, joined forces with their traditional foes, fight, win the battle, two sides, force its plan, and seize control. While these terms were used, the pro-development representative were not seen as individuals, but as representatives of de-personalized industry which caused a problem concerning endangered species and those businesses were then placed on the defensive as they justified their actions.

Summary

The results can be summarized by describing the typical endangered species story as such: The story was a reporter package just over two minutes long about a mammal or bird in the western US which addressed a conflict between environmentalists and pro-development. The conflict was most often caused by industry practice and a regulator was used as the first interview to set the stage. The language used to address the endangered species issue referenced a "battle" and was usually the language used by environmental groups while the pictures showed pro-development activity.

The previous discussion provided the information and data required to respond to the research questions. Each research question is repeated below with a brief summary statement which answers the question based on the findings of this study.

General Research Question: "How do network news stories on endangered species represent or reflect competing claimsmakers views?"

The expected "official government" view was used the majority of the time and most often in the first interview. Any distinction between environmentalists and pro-development claimsmakers as interview sources and as first interview were not significant. These two groups appear to have received somewhat equal treatment by the networks.

Research Question One: "What are the key words, terms, and phrases used in the broadcasters' (anchor and reporter) text and in claimsmakers' interview segments in network news stories about endangered species?"

The keywords, terms and phrases used by broadcasters in the anchor and reporter text and the other interview segments tend to reflect those terms used by environmentalists. The environmentalists' terms support protection of species even at the expense of private land.

Research Question Two: "What film and video pictures are typically used in network news stories about endangered species?"

The pictures tended to show animals in their environment in the same stories with a great deal of pro-development activity. This juxtapositioning of animals "next to" pro-development activity may suggest, even with the restriction and limitation imposed by the Endangered Species Act, animals continue to be threatened and encroached upon by pro-development activity.

Research Question Three: "What is the relationship between verbal messages and visual messages in network news stories about endangered species?"

There appeared to be a lack of redundancy as the stories tended to use environmental verbal terms while showing pictures of pro-development activity. The tendency was to show business pictures while at the same time saying the animals were in harms way. This may have strong implications as to the negative impression of the business.

Conclusions were then drawn based on the answers to these questions.

CHAPTER 5

SUMMARY AND CONCLUSIONS

This final chapter summarizes the findings and presents some conclusions. First a synopsis is provided of the general media framing processes involved with claimsmakers and endangered species stories on network television followed by a discussion of the use of the specific framing devices of words and pictures emphasized in this study. Some weaknesses and limitations of this study are presented, and finally, some suggestions and implications for further research are discussed.

The social constructionist perspective taken in this study suggested that people learn about their world through social interaction. Messages received from the media contribute to one's overall learning about the world. This study presented the environment as one particular area where the media constitute a significant source of information and learning about health, safety, and quality of life. Because most environmental issues are non-obtrusive and people don't experience them directly, the news media are an important source in environmental information dissemination. The result is that the media contribute to an individual's social construction of environmental problems.

The Endangered Species Act was used to examine portions of this phenomenon, as it presented a unique opportunity to examine social groups in conflict over a controversial issue with which the public has little direct experience. People have experience with domestic and some wild animals, but relatively few will ever see an endangered species in

the wild. Some people may experience the impact of regulations from the Endangered Species Act, but may never come in contact with the reason for those regulations--the animals. Their experiences with these animals come through the media and because of the visual nature of the issue and the animals, most often through television.

The theory which guided this research was media framing. Framing is the selection and salience of devices that create a central organizing idea. Salience is how prominent or conspicuous a device is. A framing device is a specific characteristic evident in communication expression such as text or images. Framing devices are words, catchphrases, symbols, and images used to determine how an issue is defined. Framing devices are the vehicles by which meaning within frames becomes apparent in media discourse.

A model called "The Framing Contexts Model" was presented to place this research within the existing body of literature concerning framing. By summarizing and categorizing existing research, the literature review section helped place media framing as one context in which framing occurs in our society. Framing also occurs in individuals and society. Within each of those areas, frames can also be found in the sender, the message, the receiver and the culture. Where the three primary areas--individuals, society and media-- overlap is where framing influence can be observed. Where media and society interact, competing claimsmaker groups attempt to influence media content in their favor. Claimsmaker groups are also known as stakeholders or those who have an interest or stake in the issue and any related public policy that may impact them and their activities.

This study attempted to identify text and pictures that reflect two competing claimsmaker groups and their messages--environmentalists and pro-development representatives. Previous researchers have stated that skillful claimsmakers have been able to sponsor certain frames but little systematic analysis has concerned the link between claimsmakers and media content (Gamson, 1989). The claimsmakers vie for exposure in the media and influence on the media message. In television news that exposure and influence occurs through on-camera interviews. This study found patterns of media content based on claimsmakers. This study addressed the messages sent by claimsmakers to the American public through network television over a thirty-year period about endangered species.

The results indicated that the endangered species issue became newsworthy because it provided several news values desired for network television news coverage in that it contained conflict between several prominent social groups. The stories over the thirty-year period contained potential consequences as related legislation and public policy impacted the economy, safety, lifestyle, quality of life and health. Some of the major conflicts found in the sampled stories included: preservation of African wildlife (cats, elephants, rhinoceroses) in an expanding global market; large bird protection, such as whooping crane and bald eagle recovery and spotted owl habitat protection; hydro-electric power projects threatening fish habitat (small snail darters and larger salmon); marine mammal hunting (whales, seals); marine mammal habitat destruction (otters and manatees); oil spills threatening both birds and marine mammals; and protection of large land mammals such as wolves and grizzlies in a hostile atmosphere perpetuated by ranchers and farmers. Through all these conflicts,

television news was there to document and explain the issues to the American public. This study found patterns where issues and explanations of issues emphasize environmental claimsmakers' language and pro-development claimsmakers' pictures. Before those specific findings and possible explanations are summarized, the general nature of the stories is presented.

Network Television News Stories Concerning Endangered Species

The three different networks presented about the same number of stories over the thirty years and most of the stories were from the western United States. Over half of the stories were reported about endangered species in the western continental United States and Hawaii and Alaska. This contradicts claims that network news stories about environmental issues are concentrated near news bureaus in population centers in the East, Midwest, Southeast and the California coast (i.e. Greenberg, et. al, 1989). The variety of animal species distributed across the United States would indicate that there are just as many or more species found in the eastern US. But other factors such as the amount of federal land in the West, the human population growth and encroachment into animal habitat in the West, and the high profile created by claimsmakers and/or the media, of certain species such as wolves, grizzlies, owls and whales, may cause story generation in those geographic areas.

Over eighty percent of the stories about endangered species were "reporter packages." Further comparisons with other issues and topics would need to be examined in relation to anchor voice-overs and readers, but this appears to be a higher percentage than

would be expected. There may be something inherent in the endangered species issue such as conflict, pretty scenery, visual interest, or "charismatic" animals that results in decisions to "package" the story. The production process involved in packaging results in a story which is longer, more detailed, and has more pictures that the other forms of presentation, such as the anchor voice-over, and the anchor reader. There may be a tendency to package endangered species issues as feature stories which lend themselves toward longer explanations with pictures. These stories tend to be "beat" areas and are not breaking news. When the networks commit reporters, photographers, and equipment to the relatively remote locations that some of these stories require, there may be an inclination to get more air time from the resource commitment and put it in package form. Also, because these stories are often included in beat areas, reporters may have more interest and commitment to the coverage than general assignment reporters covering breaking news.

A majority of the stories were about wildlife in general, but when specific animal species were profiled, they were usually mammals and birds. This emphasis on the larger vertebrates reflects similar percentages in government recovery efforts and money to help certain species. These animals are generally "charismatic" (Kohm, 1991), easiest to videotape and most appealing. The results reflect an anthropomorphic bias that animals more like humans receive the greatest television coverage. It also reflects some of the original Supreme Court debate in 1977 concerning the snail darter and the Tellico Dam. Backers of completion of the dam said the Endangered Species Act was intended to protect bears and eagles and not species such as a two-inch fish.

Some of this study's findings are consistent with previous research which concluded that the media are dependent on official government sources for information. In this case, the US Fish and Wildlife Service was the dominant source for information about the Endangered Species Act. Not only did the "regulator" category have more interviews in the sample, they were more often used as the important, scene-setting first interview. This is not surprising in that this is the agency responsible for ESA enforcement and the sample was specifically designed to examine a federal law. However, in the stories, the Fish and Wildlife Service, Department of Interior spokespersons, and state wildlife officials take on a variety of responsibilities ranging from scientific research, law enforcement, animal advocacy, and conflict mediation. Network television may not be able to portray and explain the complexity of their job. This is relevant to the stories because these people may be portrayed as strict regulators, or credible scientists, or bureaucrats.

Another aspect of this endangered species coverage, as found by other media and environment researchers, is the focus on events rather than issues (Prisco, 1995; Greenberg, et. al, 1989). Most of these stories were in reaction to issues. Frequently, a given problem had developed for years, but was reported as a crisis. One example of crisis reporting dealt with the estimation of the seriousness of the endangered species problem. With hindsight, some estimates of extinction rates given in the reports were exaggerated. For example, a report in 1980 (ABC, 11/27/80) stated the black rhino would be extinct in five years. This did not happen.

In another example, in a story that showed *the actual* last Dusky Sparrow on earth, the feeling of impending catastrophe was evident.

> REPORTER: "But for 3 billion years species died off and new ones appeared at a constant rate until this century."
>
> INTERVIEW SEGMENT WITH DIRECT QUOTE FROM RESEARCHER: "What we're doing right now is getting rid of as many as half of the species on earth within a lifetime. That's an enormous difference in time scale."
>
> REPORTER: "Many biologists believe that we are killing off so much life that ultimately we may threaten our own survival. They say we should be concerned about the loss of any species including a plain-looking sparrow" (CBS, 1/5/87).

This alarmist approach to coverage may seem to serve the environmental cause well by getting more people concerned about the environment. These kinds of stories, however, have led to an occasional backlash against alarmist environmental coverage because the predictions have not been fulfilled (Paystrup, 1996a). But the overall assessment of the focus of these stories was that pro-development forces had caused crises by threatening the survival of species.

Pro-development and Business on the Defense

In only about six percent of the stories no cause or reason for the problem was indicated, while in nearly half the stories the cause was routine business or industrial practice. When accidents and habitat destruction, usually due to pro-development activities, were included, nearly seventy percent of the stories were directly or indirectly related to

business growth and development. While there are also associated "causes" such as human population increases, the pro-development community squarely got the blame for the endangered species problem. Thus, network coverage is consistent with the current reading of the Endangered Species Act, which states the animals are endangered due to industrial activity.

It has been suggested that under the theory of agenda-setting, the media help people to know what to think about and which issues are important. Because most people do not experience environmental problems directly, the media are their source of information. It is interesting to note, from the results of this study, that not only is the endangered species an important or salient problem in society as indicated by consistent and prominent coverage, but the public can glean a "pro-development is to blame" frame from the coverage as well.

The endangered species issue has passed through issue attention cycles. Coverage was usually initiated because of triggering events such as lawsuits, legislative action, catastrophic animal deaths or accidents. When the "pro-development is to blame" frame is combined with the propensity to cover triggering events, the emphasis on business' culpability is accentuated.

Regulators and researchers held prominent places in the stories, but disagreement between environmentalists and pro-development spokespersons was often an important aspect of the story. While these two groups were shown to be in conflict more than other claimsmakers, the government and its regulators was most often cited as the entity who could or should solve the problem. This is consistent with other findings on environmental

issues (Prisco, 1995). The possible result of this type of coverage is that the emphasis on conflict perpetuates a belief that government attempts to solve the problem have been futile. The networks continued the tradition of emphasizing differences and conflict rather than common ground. This put the government in the position of fixing the problems created by pro-development. A problem as serious as the unnatural, premature extinction of species may be so big that it requires government intervention and the media coverage reflect that reality. The government, as detailed in the first chapter, has a long history of intervention when dealing with regulation of wildlife and habitat.

A small percentage of the stories covered "cooperation" between two or more claimsmaker groups in the development of a solution to the problem of endangered species conflict. From anecdotal evidence, the cooperation model appears to be a new development in managing environmental issues. For example, when the Grand Staircase Escalante National Monument in Utah was created by President Clinton in September of 1996, to be managed by the Bureau of Land Management, one of the first steps was to creation of several planning teams and tasks forces made up of various claimsmaking interests. This concept of highlighting cooperation also appeared in a network news story in 1982 when developers, environmentalists, and researchers agreed on a way to develop a southern California mountain and provide habitat for an endangered butterfly (CBS, 2/9/82).

Another example was one of the last stories sampled (ABC, 4/22/96). In 1996, a team comprised of representatives the National Wildlife Federation and Defenders of Wildlife worked with ranching and timber representatives to develop a plan for identifying

and preserving tracts of land for grizzly habitat. Other collaborative efforts have occurred in the Lake Tahoe area and the Pacific Northwest, resulting in a cooperative effort between entities which supposedly avoids lengthy legislative and legal fights. However, the general lack of stories about cooperation revealed a continued emphasis on the news value of conflict and divisiveness. Whether coverage about claimsmaker differences are actually a reflection of reality, despite attempts to collaborate, the networks often seek out the differences rather than the similarities between these groups. Again, this may be due to the news value of conflict, which supposedly is considered "newsworthy" by journalists.

Text Usage in Network News Framing

The data analyzed do not fully support the proposed hypotheses, though some interesting areas of discussion are suggested. The hypothesis concerning text usage posited that "pro-development language" would be use over environmental terms. While this was not supported, this study provides additional information about the uncertain relationship between media and environmental issues.

The identification of text frames proposed by competing claimsmakers on controversial environmental issues has been studied elsewhere (i.e. Liebler & Bendix 1996; Riechert, 1996; Prisco, 1995; Palmer, 1995; Jacobson; 1991). In several of these studies "the media" were considered to be disseminators of the official government stance. Other studies show coverage between different types of media outlets such as newspapers, magazines and broadcasting as relatively constant in their portrayal of an issue. The media

all tended to present similar positions on environmental issues. While it was not the intent of this study, failure in this study to distinguish text frames usage between environmentalists and pro-development spokespersons in their respective interview segment shows a possible distinction between print coverage and television coverage of environmental issues; that is, television may send different messages than print.

The inability to distinguish the use of distinct words, terms, and phrases between environmentalists and pro-development claimsmakers in television interviews indicates that the different uses found in previous print studies are somehow eliminated in the television news production process. Another explanation may be that the longitudinal nature of this study, which included nearly thirty years of material from different endangered species sub-issues (e.g. whaling, timber, wolves), limited the frequency and potency of certain language usage. There may have been many factors introduced into the sample with the use of a variety of endangered species issues. While distinct language between environmentalists and pro-development spokespersons was not found, they tended to used the same words in distinctly different manners. The meaning may be the same but the philosophical context is entirely different. This finding may help explain why consensus between environmentalists and pro-development representatives has been difficult. Interests are indeed different; however, the emphasis on two definitions of similar terms leads to a lack of communication and not common ground. The two groups see the world and talk about the world in distinct ways. Television news exacerbates that distinction by positioning the two groups in news

stories to discuss the issues using the same language rather than seeking common ground in areas where they can agree.

When distinctions were not found in the interview segments, a comparison of word usage between broadcasters' words and words from environmental and pro-development specialty publications and news releases found that broadcasters tend to use the language of environmentalists. The television news broadcaster's propensity to use environmentalist language found in environmental specialty publications text has deep implications. Other studies have suggested that the "news media" present the pro-development side or use a pro-development text frame, while this study found significant differences in the network's usage of the environmental text frame over the pro-development text when the term usage was compared against the specialty magazines. Environmentalists have been successful in implanting their language and words into the endangered species public debate. Because legislation is codified in verbal form, the influence of the environmental words and phrases could be the first step leading to a social definition of the issue, which has the potential of influencing regulation and policy. Suggested reasons for this apparent influence on language usage in the media by environmental groups could range from the alleged liberal bias of journalists instilled in them from the liberal education system, to a more effective public relations effort by environmental groups. Again, because of the news values of conflict and sensationalism, journalists may attempt to emotionalize the issue with the use of environmentalist terms and the discussion of dead and dying animals while pro-development language relies more on "less interesting" discussion of regulation and legislation. This may

appear to contradict other results which conclude that broadcasters show more pictures of pro-development activity than environmental activity, but a possible explanation follows the summary of how pictures were used.

Pictures in Endangered Species Stories

Most of the pictures used in these stories were of animals in their environment. It is debatable whether a picture of an animal supports the environmentalists' perspective or whether it is a "neutral" shot, which does not support one claimsmaker over another. Environmentalists tend to want to preserve and protect animals in their natural environment and these pictures would support that perspective. If, however, an animal picture is a neutral picture, simply showing the issue at hand, then the other visuals modify those animal pictures and must be examined in context of claimsmakers' influence. There was an overwhelming use of pro-development activity pictures over environmental activist activities, not including "generic" animal pictures. This means that most of the pictures were of animals and pro-development activities. While showing pro-development and animal pictures may be an attempt to balance the coverage, the result is the pictures show conflict between animals in their environment and pro-development activity, suggesting that the two may not be compatible.

In the process of showing pro-development activity, wide shots were used more often than close-ups. Drew and Cadwell (1985) found that when the camera moved in for a close-up, the video was evaluated more favorably on several credibility measures--real, true,

believable, accurate, reliable, and faithful. These closer pictures were also considered more relaxing, important, informative, clear, easy to watch, and likable than shots further away. The tendency to maintain distance from pro-development and show mostly wide shots of activities suggests an unwillingness by broadcasters to personalize the pro-development sector. There is not the same tendency with environmentalists. The network cameras moved in close with environmentalists and showed more close-ups than wide shots. While close-ups provide intimacy and emotion, there may be danger of exposing unwanted personal idiosyncrasies which may be perceived as odd and unusual and the person's legitimacy may be damaged. As researchers have found (Parenti, 1986; Gitlin, 1980), media portraits of activist groups tend to marginalize the groups. But in this case, the networks did not even get close enough to pro-development spokespersons and their activities for a viewer decision about marginalization to be made.

Visual-Verbal Redundancy

The question was asked earlier if textual and visual messages resonate within the television medium. An examination of the results shows environmental language is used in the presence of pro-development activity pictures. Depending on the receiver's perspective, this may or may not be an incongruent message and may or may not be an indication of resonance because of individual differences. This study found that the pictures and words were somewhat contradictory. However, an area of research beyond the scope of this study is what viewer do with the combination of the verbal and visual messages. While a message

of preservation may be verbalized, a message of business, growth, and development is visualized. If a receiver filters all messages through a "development and business growth is good" frame, then a lack of redundancy may appear. The result may be a confused message, with little information upon which to act. However, if the receiver filters these same messages through a "preserve nature, reduce development impact" frame, the message may be consistent and clear. If the reporter states the spotted owl needs a safe place to live while showing a picture of a logger cutting down a tree, there is a definite "anti-business" message, even though the logger was simply cutting down a tree as part of routine business. These types of sequences appeared consistently throughout the sample. In the 1970s, pictures of whaling showed harpoon points exploding in the heads of whales as the text talked about the fact that most whaling products could be replaced by synthesized products. To extend the anti-business text, the reporter talked about the human characteristics of the whale such as whales having a brain similar to the human's and that the calf, which had just lost its mother to the harpoon, was now an orphan.

Implications for Framing Contexts

In relation to the "Framing Context Model" proposed in Chapter Two, this study provides useful information for several of those areas. While the intent of the study was to provide a macro-analysis of media framing, the literature review provided a macro-analysis of framing or an explanation of how media framing functions with other framing concepts. The explanations of relationships provided by the model were heretofore ambiguous.

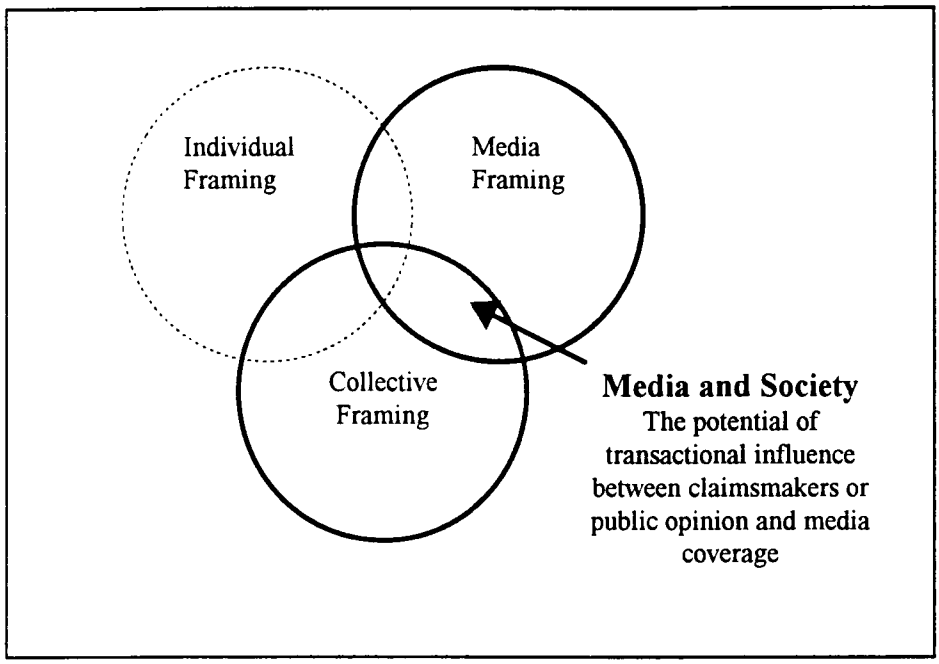
The model suggested there are three general areas of framing: individual framing, collective framing, and media framing. There are also three overlapping framing contexts: individuals and media, social psychology and media and society. While research can examine elements and concepts within each area, the framing process involves an interaction between the areas. Gitlin (1980) describes social movements and the media "pressing" on each other. Framing thus involves the interaction of elements in society such as individuals, groups and the media.

This study examined aspects of several areas as it went beyond a content analysis, isolated media content, and examined relationships of media content relevant to other framing concepts such as claimsmaker involvement and individual response to messages. While no direct effects and influences can be attributed based on this study, it does reveal areas where relationships appear to occur and provides direction for further research.

An implication for broadcast journalists is the need to examine the influence of the environmental movement on language usage and the fairness of the coverage. Questions could be asked whether the pro-development side of the endangered species issue is accurately portrayed and whether, as some journalists have recommended (Ryan, 1991), journalism has become more advocacy-oriented in environmental coverage. It is logical that two groups discussing the same issue over a thirty-year period will use similar language. The distinction found in this study is that while similar language was used, broadcasters' definitions and uses of specific terms matched those used by environmentalists more closely.

The content analysis focused on the media framing portion of the Framing Context Model as it attempted to detail and describe the way a specific medium, network news, portrayed a specific issue, endangered species. Content analysis revealed consistent patterns of environmental language and pro-development picture usage in the stories. The study found that there are some possible major differences in how television handles this issue in relation to print media. Riechert (1995) and Smith (1995b) found the Associated Press to use pro-development or property owners frame terms equal to or more than environmental terms. This study found network news used environmental language more than pro-development language based on a comparison with specialty publications by the two groups. Any such differences between print and broadcast coverage of a specific issue would need to be better explored. Research attempting to trace possible specific links, effects and impacts of this difference on collective behavior (public opinion) and individual framing (learning) should be undertaken. The study also examined the implications for the media and society area of the "Framing Contexts Model" when it discussed claimsmaking portrayal and potential influence on the media (see Figure 5-1).

Apparently pro-development has the opportunity to get pictures of its activities on the network news. The reasons for this connection are suggested in other studies and essays. They range from the "political economy" perspective, which is prevalent in American society, to the "dominant social paradigm." The political economy perspective suggests that growth and development is good and essential for a healthy society. The "dominant social paradigm" suggests the pro-business, pro-growth and development



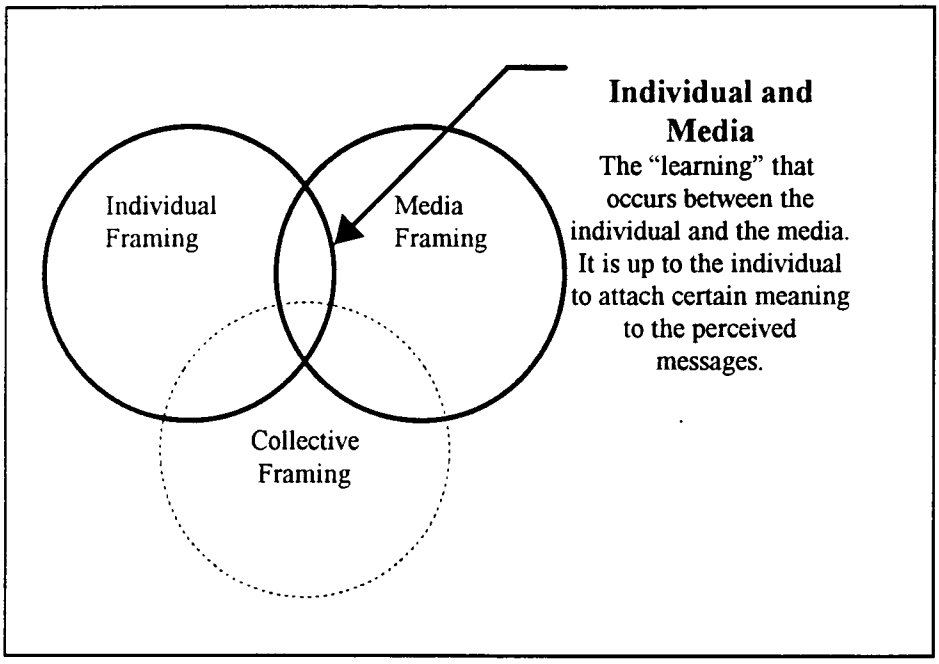


Figure 5-1. Relationship of Individual and Collective Framing with Media Framing

approach to problems is the predominant way of thinking in America. Because the media are businesses themselves and because they are subservient to advertising dollars, they show pictures of business as usual.

The question is whether pro-development pictures combined with environmental terms actually results in a positive or negative framing of pro-development. Another interpretation of the claimsmaking influence on the news media is more of a news structure response to news values. Pro-development activity is more visually interesting with oil spills, falling trees and impressive dams. It is the area under impact and location of potential conflict and hence is the logical "scene" to show when talking about conflict between ESA regulations and preservation and restoration of wildlife. Because businesses are usually the direct respondent to endangered species litigation or legislation, it is easier to show businesses.

Another area needing examination based on the findings is the impact of news values and how they work with the particular subject of endangered species on network television news. The use of news values to govern story selection and emphasize was apparent. The news value of "conflict" appears to be a dominant influence as a high percentage of the stories portrayed a conflict and the language itself often used "battle" metaphors. Visually, conflict was introduced as animals were required to confront pro-development and business activities. The news value of timeliness, which suggests journalists report information on the here and now, seemed to be over emphasized. While many stories dealt with accidents, most dealt with long-term effects. But these effects were then presented in a context of

requiring immediate action. The news value of proximity or covering something close to home was evident in that most of the stories were domestic in nature. However, while a majority of the US population resides on the East coast, most of the stories were reported from the West. This is inconsistent with concept that journalists will report more stories from areas that impact most people. adjusting to ESA policy than it is to show other claimsmakers supporting ESA regulation. Another possible reason is that file footage (pictures the networks keep on hand for future use) of pro-development activity can be used in "generic" ways for many different stories.

Important questions can be asked about whether the news coverage, as documented in this study, has a particular effect on the viewing public and whether the coverage can be altered to provide better audience enlightenment.

Individual framing, which includes perceptions, value development, and the learning that occurs from television, takes place when media interact with individuals' backgrounds and experiences (see Figure 5-1.). That context is the overlap of the individuals' experience with media exposure. In this area most individuals learn about endangered species because they have limited direct personal experience with these animals. Individuals also learn about many social groups because they lack direct experience with many groups. The public tends to learn about claimsmaking groups such as environmentalists or pro-development representatives from these media experiences.

The results of the mixture of messages between environmental language and pro-development pictures, combined with individual experience brought to media exposure may

result in the viewer confusion found concerning environmental issues (Cantrill, 1992). While the media may suggest environmental activities are positive and that people should participate, these messages may not be effective. People may know a lot about the issue, but lack the necessary understanding to act upon that information. This is known as "well-informed futility" (Wiebe, 1973). Public opinion polls show that people know a lot about the issues, but the degree of concern has not increased. The suggested consequence is a lack of improvement in environmental conditions because of a lack of action by individuals, governments and society.

Television news coverage could be improved by focusing on developing trends rather than reacting to events. Trends can be altered through preemptive actions, but reaction results in little long term change.

Limitations

From a content analysis, no conclusions can be reached from this study concerning television viewers' behavior or the intentions of the journalist. That was not within the scope of this study. In addition to the fact that behavior was not addressed, but links between media content and attitude and behavior remain uncertain. This content analysis was not an examination of accuracy between which animals were actually on the federal endangered list and those stated in stories as endangered. Due to the regional nuances and complexity of the listing process, animals which were stated to be endangered were included in the sample. This may have introduced error in that stories of marginal

importance to the endangered species act were included in the sample. It must be mentioned that the terms "endangered species" and species at risk or threatened have different meaning depending on the context. According to legal definitions, certain animals may be categorized, but according other scientific studies and anecdotal evidence, different claimsmakers may use the terms rather loosely. Again, the purpose of this study was to examine the endangered species issue and not the precise legal definitions of the term endangered species.

Further research in this area must examine the longitudinal aspects of these data. Subtle differences by time, presidential administration, social influences, natural and human-cause disasters and public opinion which has been documented to fluctuate would all provide insight as to why certain terms and pictures were used over time.

The attempt was made to lump all endangered species issues together. This may not have been as fruitful as expected because the variety of sub-issues involved may have introduced excessive variation in claimsmaking representation. The VBPro family of software proved useful in sorting and identifying word usage from the distinct claimsmakers. The software, however, does seem to require significantly larger samples than were available from the text transcription of the 165 stories. A related issue is whether the data lent themselves to t-test comparisons when the mean use claimsmaker terms was less than one term per story. The final t-test comparing the "composite list" was a much better test because it showed mean use of 15 terms rather than less than one. The claim that

and average of one word difference per story constitutes a change in frame needs further exploration.

The time frame presented in this study could have offered additional insights over shorter, sub-issue specific studies. The longitudinal tracking of the data trends could reveal more about issue attention cycles and claimsmaker involvement.

While the intercoder reliability levels were acceptable, the placement of the claimsmakers into the six categories for one story may have been problematic. The endangered species issue creates interesting situations. In one story the US Fish and Wildlife Service (USFWS) was opposed to zoos importing pandas from China for research and exhibition. The zoo claimed it could help the panda better if more of the species were in captivity. The USFWS believed the species would have a better chance of recovery with careful monitoring in the wild. In other stories, the USFWS was working closely with zoos on research. In some stories the zoos were perceived as contributing vital research and in others, zoos were the "businesses" that caused the loss of animals in the wild resulting in endangered status.

The coding procedure in this study also may not have allowed identification of claimsmakers such as environmentalists or pro-development representatives who were brought into the "regulator" category under collaborative efforts when teams assembled to participate in cooperative planning. These individuals may have represented a certain environmental or pro-development view, but because of the title of a planning team they may have been coded as a regulator.

Limits of this study are based on intercoder reliability aspects as the coders attempted to categorize material. The available archival footage also limits the study to a specific time period. While the ability to measure frames reliably may be questioned, this study builds on the available knowledge base toward understanding the ways claimsmakers may influence the framing process.

The study of visual content analysis remains quite subjective. More objective computer-assisted visual cataloging techniques are still under development. Future studies will need to continue the combination of text and visuals in providing a better picture of how television helps to paint versions of reality. This study is limited to the realm of environmental issues as other issues may have distinct qualities unmeasured here.

Future Research

Some of the conclusions of this study, such as the television network's tendency to show pro-development pictures while stating environmental language, contradict past findings. These findings need to be approached cautiously with more research.

Future studies could address similar issues on specific and general levels. Specific areas of interest include researching the reasons for a western United States bias in coverage when population centers and animal distribution would expect more coverage in the eastern United States. There may be other values associated with the West that cause this propensity to cover western endangered species stories.

The effect of television shot difference needs to be addressed with more rigor. There are many assumptions that close-up shots provide personalized, intimate, and thus more positive reactions to subjects.

On a more general level, this study introduces some possible explanations for the confusion and negative relation of television viewing to environmental concern as seen in studies showing that those who watch more television indicate less concern for the environment. This area needs much more exploration, as television continues to be a dominant source for public information. The television and environment relationship seems to be quite complex. While this detailed examination of television news's words and pictures begins that process, the personal frames of reference brought to the media experience and the resulting behavior should also be examined.

With specific issues, television may send different messages than print media. This study provides strong evidence that framing research must go beyond simple text analysis in broadcasting. Not only can the pictures modify, negate, and confuse the intended textual message, but subtle nuances of speech intonation and facial expressions of the various spokespersons who contribute to the "message" can also modify the textual message.

Other direct comparison of news topics and the tendency to package or have more detail and pictures needs to be compared to other issues and topics. The percentage of endangered species stories which are fully packaged appears to be a higher percentage than would be expected from general news topics. The characteristics of the endangered species issue need to be addressed in light of the evolution of new computer technologies, and the

new modes of viewing news may make the traditional "packaging" of news obsolete due to viewer or receiver choice on Internet-provided news services. But the differences between information provided in packages and information provided in shorter voice-overs or by readers should be more closely examined to see whether viewers need the additional time and pictures in order to act.

More research into the psychological background and current perceptions of media messages needs to be done in framing research as the receiver brings a great deal of baggage to the media experience. Researchers have known about individual differences for many years, but those individual differences need to be more closely correlated to public opinion as "frame resonance" can increase message potency for separate individuals. The way an individual viewer organizes and interprets the text along with the pictures and as an active participant in the framing process along with the media and social influences remains a wide area for potential research. Framing research provides some possible answers about the relative prominence of claimsmakers in competing for issue definition. It also provides clues about how people learn from the media about that group influence.

Conclusion

Framing is a relatively new development in the area of mass media research. It still lacks a commonly accepted definition and domain. For this reason a model was proposed which helped place different approaches to framing into context. The general areas of

framing research proposed were individuals, society and media. The area of media content can be examined for influence from special interest groups.

This study looked at how network television used words and pictures on stories about endangered species over a thirty-year period. Through content analysis informed by framing analysis, the selection and importance placed on patterns of words and pictures was examined in the attempt to find any tendency by the networks to consistently present an issue in a particular way which favored one claimsmaker group over another. The purpose of the examination was to identify possible links and influence by claimsmaker groups. Claimsmakers are those people who have an interest in the issue because of implications to their livelihood, quality of life and perceived risks. Influence can be determined by consistent patterns groups use to express their ideas and definitions about an issue. Possible patterns identified in media coverage can illuminate the area of social group influence or public opinion pressure on network coverage.

The television network stories framed endangered species by using environmental language with pictures of pro-development in conflict with animals. The text may modify the pictures in a manner that places pro-development in a bad light as animals are struggling to survive against big business. The network news framing of the endangered species issue consisted of statements that pro-development activities have caused the endangered species problem. Those statements along with consistently showing pro-development as usual or harmful accidents due to businesses reinforced this pattern. The government was most often seen as the entity responsible for solving the problem, which would necessarily involve

regulation or punitive action against business. Business was seen as being on the defensive and required to justify its actions in light of the possible extinction of animals. While there is ample evidence in prior research to suggest that the news media reflect a pro-business attitude in their framing of issues, in the case of network news and the endangered species issue, that may not be the case due to the use of environmental language and the preponderance of animal pictures in contrast to potentially harmful pro-development activity.

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APPENDIX

Vanderbilt Television News Archive Loan Request
from Jon M. Smith - Southern Utah University

No.	Date	Network	Title	Day	Begin Time	End Time	Time
001	1968.10.03	NBC	CAT FURS/1 MAN CRUSADE	THURS	:24:20	:27:30	3:10
002	1969.01.31	CBS	CA OIL SLICK	FRI	:16:30	:18:10	0:40
003	1969.10.01	NBC	NUCLEAR TEST	WED	:23:20	:23:30	0:10
004	1969.10.01	CBS	FISH DEATHS/ GULF OF MEXICO	FRI	:20:10	:22:10	2:00
005	1970.03.27	NBC	HICKEL/OIL COS./AK	FRI	:16:00	:16:10	0:10
006	1970.10.06	CBS	WHALES/ENDANGERED SPECIES	TUES	:21:00	26:50	5:50
007	1970.12.21	ABC	LA/ OIL SLICK	MON	:13:50	:15:40	1:50
008	1970.06.16	CBS	ENVT./ALLIGATORS	TUES	:23:50	:27:30	2:40
009	1970.12.29	CBS	VN/ DEFOLIANTS	TUES	:03:30	:07:50	4:20
010	1970.12.25	CBS	CA/ WILDLIFE	FRI	:14:50	:20:40	5:50
011	1971.05.19	CBS	WY/EAGLES	WED	5:49:20	5:49:40	0:20
012	1971.12.14	NBC	PREDATOR CONTROL/INT. DEPT	TUES	5:53:30	5:57:50	4:20
013	1971.06.16	CBS	LAKE APOPKA/ BACTERIA	WED	5:51:50	5:52:30	:40
014	1971.01.21	CBS	GULF OIL CO./ SAN FRAN BAY OIL	THUR	5:48:50	5:49:20	:30
015	1971.01.24	NBC	NEW HAVEN OIL SLICK	SUN	5:37:00	5:39:30	2:30
016	1972.04.18	ABC	POWER RESOURCES	TUES	5:17:30	5:20:40	3:10
017	1972.06.14	ABC	DDT BAN	WED	5:10:30	5:13::00	2:30
018	1973.06.29	CBS	WHALING/ENDANGERED SPECIES	FRI	5:49:50	5:52:20	2:30
019	1973.01.15	CBS	WHALES	FRI	5:54:40	5:57:50	3:10
020	1974.09.16	NBC	WILD HORSE ROUNDUP	MON	5:54:10	5:57:10	3:00
021	1975.04.21	CBS	WHOOPING CRANE/EGG	MON	5:57:10	5:57:30	0:20
022	1975.06.26	CBS	WHOOPING CRANE/EGG SNATCH	THURS	5:56:40	5:57:20	0:40
023	1975.07.07	CBS	ALLIGATORS	MON	5:54:00	5:54:20	:20
024	1975.10.10	ABC	WHOOPING CRANES	FRI	5:15:10	5:15:50	:20
025	1975.02.06	CBS	TANKER EXPLOSION/ FOLLOW-UP	THUR	5:51:00	5:52:30	1:30
026	1976.01.20	NBC	TIMBER WOLVES	TUES	5:55:40	5:56:00	0:20

027	1976.11.26	ABC	WILDLIFE/PROTECTION/FUND MTG.	FRI	5:24:10	5:27:20	3:10
028	1976.01.20	CBS	WOLVES/ AK	TUES	5:53:20	5:53:40	:20
029	1976.07.30	NBC	DUCKS/ LEAD POISONING	FRI	5:52:20	5:52:50	:30
030	1976.09.14	ABC	BIBLICAL ANIMALS/ PRESERVATION	TUES	5:25:40	5:28:00	2:20
031	1977.02.18	NBC	SNAIL DARTERS/TVA DAM	FRI	5:50:10	5:53:10	3:00
032	1977.05.19	CBS	KENYA BANS HUNTING	THURS	5:48:40	5:48:50	0:10
033	1977.01.06	ABC	DE RIVER/ OIL SPILLS/ EPA STUDY	THUR	5:05:20	5:08:10	2:50
034	1977.08.01	ABC	FIRE/ OKEFENOKEE ENDANGERED	MON	5:55:10	5:57:20	2:10
035	1977.01.03	CBS	WOOL GROWERS/ COYOTES	MON	5:40:30	5:43:20	2:50
036	1978.05.02	CBS	SEN. CMTE./ENDANGERED SPECIES ACT	TUES	5:54:40	5:55:00	0:20
037	1978.06.16	NBC	WATER PRO/ HSE./ TELLICO & SNAIL D.	FRI	5:37:50	5:39:50	2:00
038	1978.03.05	CBS	OIL SPILL/ WILD BIRD DEATHS	SUN	5:11:50	5:14:10	2:20
039	1978.06.15	CBS	SUP. CT./ SNAIL DARTER V. TELL. DAM	THUR	5:33:10	5:35:40	2:30
040	1978.08.28	ABC	CT RIVER SALMON PROJECT	MON	5:17:10	5:19:40	2:30
041	1979.09.24	CBS	RHINOCEROS	MON	5:46:20	5:46:40	0:20
042	1979.01.23	CBS	END. SPECIES CMTE./ TELL. /GRAY DAM	TUES	5:44:20	5:47:30	3:10
043	1979.02.21	NBC	SEG. 3 (KILL ANIMALS FOR FASHION..)	WED	5:47:00	5:51:50	4:50
044	1979.11.22	ABC	NM/ BIGHORN SHEEP	THURS	5:23:20	5:25:50	2:30
045	1979.08.05	NBC	MEXICO/ OIL SLICK	SUN	5:37:30	5:39:20	1:50
046	1979.09.24	ABC	CA/ SAN FRAN. BAY POLLUTION	MON	5:09:20	5:11:20	2:00
047	1980.11.27	ABC	SPEC. SEG. (PART III:AFRICA ANIMALS)	THURS	5:54:10	5:58:20	4:10
048	1980.07.25	CBS	CA CONDOR	FRI	5:49:20	5:51:30	2:10
049	1980.07.21	ABC	AK LAND BILL	MON	5:51:00	5:54:10	3:10
050	1981.03.29	CBS	OH/SURROGATE LION MOTHER	SUN	6:22:20	6:22:40	0:20
051	1981.11.19	CBS	ENDANGERED SPECIES	THURS	5:55:20	5:57:20	2:00
052	1981.09.12	NBC	MT/ ENDRIN	SAT	6:53:00	6:53:30	:30
053	1981.09.25	NBC	MT/ ENDRIN POISONING	FRI	5:51:10	5:53:20	2:10
054	1981.05.14	NBC	SPECIAL ASSIGNMENT (MT. ST. HELEN)	THURS	5:49:40	5:53:40	4:00
055	1982.02.09	CBS	BUTTERFLIES	TUES	5:55:00	5:57:10	2:10
056	1982.02.20	NBC	BALD EAGLE	SAT	6:55:50	6:57:50	2:00

057	1982.06.20	CBS	NTL. BALD EAGLE DAY	SUN	6:24:30	6:27:10	2:40
058	1982.07.15	ABC	FL/ DEER HUNT	THURS	5:39:00	5:40:40	1:40
059	1982.07.19	ABC	FL/ DEER HUNT	MON	5:37:20	5:39:20	2:00
060	1983.11.16	CBS	EAGLE	WED	5:54:00	5:56:50	2:50
061	1983.01.04	CBS	ENDANGERED SPECIES	TUES	5:40:50	5:41:10	:20
062	1983.12.19	ABC	END. SPECIES/ PRIMATES AT DUKE U.	MON	6:25:50	6:28:00	2:10
063	1983.06.15	ABC	OPERATION EAGLE	WED	5:54:40	5:56:10	1:30
064	1983.06.15	CBS	OPERATION EAGLE	WED	5:42:50	5:44:50	2:00
065	1983.08.09	ABC	WILDLIFE PRESERVER	TUES	5:55:00	5:58:00	3:00
066	1983.11.08	NBC	RABIES	TUES	5:48:00	5:50:00	2:00
067	1984.10.05	NBC	ILLEGAL TROPHY HUNTING	FRI	5:44:30	5:46:30	2:00
068	1984.05.26	CBS	TIMBER WOLF	SAT	6:53:40	6:56:50	3:10
069	1984.09.03	NBC	BALD EAGLE COMEBACK	MON	5:46:10	5:46:30	:20
070	1984.03.24	CBS	CO/ BIGHORN SHEEP	SAT	6:54:30	6:57:40	3:10
071	1984.07.10	ABC	'84 VOTE/ REAGAN	TUES	6:00:00	6:02:20	2:20
072	1984.08.02	CBS	GULF OF MEXICO/ OIL SPILL	THURS	5:47:20	5:49:10	1:50
073	1984.01.04	NBC	WEATHER/ WILDLIFE	WED	5:39:30	5:41:50	2:20
074	1984.10.04	ABC	CANADA/ CARIBOU DEATHS	THURS	5:56:20	5:58:00	1:40
075	1985.01.16	NBC	WILDLIFE BLACK MKT.	WED	5:44:30	5:45:00	0:30
076	1985.10.14	CBS	WY/ FERRETS	MON	5:54:30	5:56:50	2:20
077	1985.07.08	NBC	FALCONS	MON	5:54:50	5:58:00	3:10
078	1985.03.29	NBC	CA/ WATER POLLUTION	FRI	5:45:10	5:45:30	:20
079	1985.12.24	ABC	SPEC. SEG.: END. SPECIES(FL PANTHER)	TUES	5:49:00	5:53:00	4:00
080	1986.09.11	ABC	UT/RARE FALCON	THUR	5:55:40	5:57:50	2:10
081	1986.07.16	ABC	ME/ GULLS	WED	5:55:50	5:58:20	2:30
082	1986.11.12	CBS	RED WOLF	WED	5:54:40	5:56:40	2:00
083	1987.09.16	CBS	CA/BALD EAGLE	WED	5:54:30	5:56:40	2:10
084	1987.01.05	NBC	ENDANGERED SPECIES/ SPARROW	MON	5:55:30	5:58:00	2:30
085	1987.04.21	CBS	SEA TURTLE CONTROVERSY	TUES	5:45:30	5:47:30	2:00
086	1987.08.20	CBS	RI/ NUDISTS VS. PIPING PLOVERS	THURS	5:54:10	5:56:50	2:40

087	1987.02.17	ABC	NV/ WILDLIFE REFUGE CRISIS	TUES	5:56:20	5:58:10	1:50
088	1987.04.22	CBS	TRUMPETER SWAN	WED	5:54:40	5:56:30	1:50
089	1987.08.24	ABC	CA/ SEA OTTER RELOCATION	MON	5:55:10	5:58:00	2:50
090	1988.03.15	CBS	PACIFIC OCEAN/DOLPHINS	TUES	5:54:50	5:57:00	2:10
091	1988.02.24	ABC	BIG GAME POACHING	WED	5:48:00	5:50:00	2:00
092	1988.11.03	CBS	HARTFORD, CT/ RHINO SMUGGLING	THURS	5:46:30	5:49:00	2:30
093	1988.03.07	CBS	CO/ SNOW GEESE-WHOOPING CRANE	MON	5:54:00	5:56:40	2:40
094	1988.06.07	CBS	GRIZZLY BEAR/ PRESERVATION	TUES	5:54:00	5:56:50	2:50
095	1989.02.16	CBS	ELEPHANTS/IVORY TRADE	THURS	5:55:50	5:58:30	2:40
096	1989.03.06	CBS	WA/ SEA LIONS	MON	5:55:20	5:55:50	:30
097	1989.12.13	ABC	ENVT.: AMPHIBIANS	WED	5:45:50	5:47:00	1:10
098	1989.01.05	NBC	WA COAST/ OIL SPILL	THURS	5:45:50	5:48:00	2:10
099	1989.05.09	ABC	AK/ OIL SPILL/ MIGRATORY BIRDS	TUES	5:55:10	5:57:50	2:40
100	1989.04.26	CBS	PACIFIC NORTHWEST/ SPOTTED OWL	WED	5:45:30	5:46:00	:30
101	1989.03.24	CBS	AK/ OIL SPILL	FRI	5:30:10	5:32:20	2:10
102	1989.10.10	NBC	HURRICANE HUGO/ SC WILDLIFE	TUES	5:44:50	5:47:30	2:40
103	1989.01.10	CBS	US-CAN. RELS/ WA COAST OIL SPILL	TUES	5:46:30	5:48:40	2:10
104	1989.03.07	NBC	WEST/ POACHING STING	TUES	5:48:40	5:50:40	2:00
105	1989.09.14	NBC	AK/ OIL SPILL/ EXXON CLEANUP	THURS	5:44:20	5:47:10	2:50
106	1989.04.29	NBC	AK/ OIL SPILL/ CLEANUP	SAT	5:40:10	5:42:40	2:30
107	1989.05.08	NBC	AK/ OIL SPILL/ EXXON	MON	5:40:00	5:42:20	2:20
108	1989.03.22	CBS	TIMBER IND. VS. N. SPOTTED OWL	WED	5:55:40	5:58:30	2:50
109	1989.04.21	ABC	AK/ OIL SPILL/ VALDEZ	FRI	5:41:40	5:45:20	3:40
110	1990.06.26	NBC	PAC. NW/LOGGING V. N. SPOTTED OWL	TUES	5:37:30	5:37:50	0:20
111	1990.05.27	CBS	SOUTHWEST/ MEXICAN WOLVES	SUN	5:12:40	5:15:20	2:40
112	1990.04.18	ABC	AM. AGE. (ENV. ENDANGERED SPECIES)	WED	5:48:40	5:53:40	5:00
113	1990.06.26	CBS	PAC NW/ LOGGERS V. N. SPOTTED OWL	TUES	5:40:20	5:42:10	1:50
114	1990.02.09	CBS	CA/ OIL SPILL	FRI	5:35:00	5:37:00	2:00
115	1990.03.01	NBC	MONTEREY, CA/ OFFSHORE DRILLING	THURS	5:33:20	5:35:10	1:50
116	1990.01.30	ABC	GREAT LAKES/ MUSSELS	TUES	5:49:50	5:53:10	3:20

117	1990.05.11	CBS	END. SPEC. ACT/ LUJAN/ RED SQUIRREL	FRI	5:40:00	5:42:10	2:10
118	1990.07.14	NBS	COLORADO/ PRARIE DOG KILL	SAT	5:37:50	5:40:20	2:30
119	1991.03.27	NBC	AS. EARTH (ENDANGERED SPECIES)	WED	5:49:30	5:52:00	2:30
120	1991.09.03	NBC	AS. EARTH: BLACK-FOOTED FERRET	TUES	5:40:40	5:42:40	2:00
121	1991.12.14	ABC	HAWAII/ ENVT. /END. SPECIES	SAT	5:44:30	5:47:50	3:20
122	1991.11.14	CBS	ENVIRONMENT: SOCKEYE SALMON	THUR	5:50:40	5:52:20	1:40
123	1991.12.11	ABC	CALIFORNIA GRAY WHALES	WED	5:55:50	5:58:00	2:10
124	1991.04.02	ABC	NW/ ENVT. SOCKEYE SALMON	TUES	5:41:00	5:42:50	1:50
125	1991.04.13	ABC	PLATTE RIVER, NE/ RETURNING CRANE	SAT	5:55:40	5:58:10	2:30
126	1991.09.16	NBC	AS. EARTH: DESERT TORTOISE	MON	5:50:50	5:52:50	2:00
127	1991.03.23	ABC	COSTA RICA/ LEATHERBACK TURTLES	SAT	5:55:00	5:57:50	2:50
128	1992.06.12	ABC	SUPREME COURT /END. SPECIES	FRI	5:36:20	5:36:40	0:20
129	1992.05.14	CBS	OREGON/ N. SPOTTED OWL/ LOGGING	THURS	5:41:10	5:41:30	:20
130	1992.11.19	ABC	WOLVES IN THE WILDS	THURS	5:55:20	5:58:10	2:50
131	1992.10.27	NBC	AS. EARTH (NC ENDANGERED SPECIES)	TUES	5:55:20	5:57:50	2:30
132	1992.01.09	NBC	PAC NW/ SPOTTED OWL/ LOG IND.	THURS	5:50:50	5:51:10	:20
133	1992.06.08	ABC	ENVIRONMENT: EARTH SUMMIT	MON	5:44:30	5:46:30	2:00
134	1992.05.14	NBC	ENV. BUSH ADM. NORTHERN SPOTTED	THURS	5:30:30	5:32:50	2:20
135	1992.04.09	NBC	ASSIGN. EARTH: SALMON FISHING	THURS	5:56:10	5:58:20	2:10
136	1992.10.07	NBC	ASSIGN. EARTH: MIG. SONGBIRDS	WED	5:55:50	5:58:10	2:20
137	1992.09.18	ABC	DISASTER RELIEF/ KAUAI'S BIRDS	FRI	5:49:00	5:51:20	2:20
138	1992.04.02	ABC	AM. AGENDA (ENV. OPPOSING COL.)	THUR	5:49:20	5:53:50	4:30
139	1992.01.18	ABC	CALIFORNIA SEA OTTERS	SAT	5:55:20	5:58:20	3:00
140	1993.03.25	NBC	ENVIRONMENT/CA GNATCATCHER	THUR	5:53:20	5:53:40	0:20
141	1993.11.04	ABC	TEXAS/ WHOOPING CRANE	THURS	5:56:00	5:58:00	2:00
142	1993.12.21	NBC	PANDA CONSERVATION	TUES	5:56:20	5:58:10	1:50
143	1993.06.30	ABC	NW/ LOGGING VS. ENVIRONMENT	WED	5:42:30	5:44:10	1:40
144	1993.08.13	NBC	YELLOWSTONE NAT.PK./GRIZZLY BEAR	FRI	5:54:50	5:58:20	3:30
145	1993.09.15	ABC	AM. AGE. (ENVT: WOLVES IN YELLOW..	WED	5:49:10	5:53:40	4:30
146	1994.06.30	NBC	BALD EAGLES	THUR	5:56:00	5:58:10	2:10

147	1994.03.24	ABC	AM. AGENDA (ENVT.: PLATTE RIVER)	THURS	5:54:20	5:58:10	3:50
148	1994.10.08	NBC	FOCUS (ENVT.: NAT PARK MT. GOATS)	SAT	5:46:50	5:50:00	3:10
149	1995.06.29	ABC	SUP. CRT/ENV/ENDANGERED SPECIES	THUR	5:38:00	5:38:20	0:20
150	1995.08.30	CBS	EYE ON AM. (ENDANGERED SPECIES A.)	WED	5:54:10	5:58:20	4:10
151	1995.07.15	NBC	MOMENT OF WEEK (END. SPECIES)	SAT	5:52:40	5:53:50	1:10
152	1995.01.16	CBS	ARKANSAS/ BALD EAGLE	MON	5:56:00	5:58:00	2:00
153	1995.04.17	ABC	SUP. CRT. END SPECIES V. PROPERTY	MON	5:33:20	5:35:50	2:30
154	1995.02.10	NBC	RAINBOW TROUT DEATHS	FRI	5:51:10	5:53:30	2:20
155	1995.08.05	NBC	FOCUS (ENVT. WILDLIFE DEATHS)	SAT	5:47:00	5:49:20	2:20
156	1995.03.05	ABC	N. CAROLINA/ RED WOLVES	SUN	5:51:20	5:54:20	3:00
157	1996.01.23	NBC	MANATEE	TUES	5:55:50	5:58:10	2:10
158	1996.10.21	NBC	ENDANGERED SPECIES/ FERRETS	MON	5:55:30	5:58:10	2:40
159	1996.03.15	ABC	FLORIDA/ MANATEE DEATHS	FRI	5:49:20	5:51:10	1:50
160	1996.02.26	ABC	POLITICS	MON	5:50:40	5:52:30	1:50
161	1996.02.06	CBS	WASHINGTON/ BIG FOOT	TUES	5:56:10	5:58:30	2:20
162	1996.04.04	CBS	GRAND CANYON/ EXPERIMENT	WED	5:53:40	5:54:10	:30
163	1996.05.18	NBC	AS. EARTH (MON. IS., MA: SEAGULLS)	SAT	5:49:50	5:51:30	1:40
164	1996.03.30	NBC	WASHINGTON/ENV. FISH V. SEA LIONS	SAT	5:42:10	5:44:10	2:00
165	1996.04.22	ABC	AM. AGEN. (ENVT: GRIZZLY BEARS)	MON	5:45:40	5:50:00	4:20
				ESTIMATED TOTAL TIME			5:59:20

Code Sheet for Endangered Species Network News Segments **Case # __ __ __**

Var.	Coding Information	Code
1.	Case number	
2.	Coder 1. Author 2. 2nd Coder (date coded / / 97)	
	Information from News Archive	
3.	Story slug	
4.	Date of Broadcast Month/day/year	/ /
5.	Network 1. ABC 2. CBS 3. NBC	
6.	Anchor name Reporter name	
7.	Geographic location (specify) 1. US-NE 2. US-SE 3. US-MW 4. US-SW 5. US-Mount 6. US-NW 7. US-AK.HI 8. Int. 9. US & Int	
8.	Type of story - 1. Anchor Reader 2. Anchor VO 3. Reporter package	
9.	Story Length (length in seconds including anchor) min. sec. =	secs.
10.	Starting time from beginning of newscast in seconds. min. sec. =	secs.
11.	Last story? 0. No 1. Yes	
	Information from general viewing on animals and general claims	
12.	Story focuses on which animal classification? 0 no animal shown 1. mammal 2. birds 3. fish 4. Reptiles/amphibians 5. insects, plants and other 6. Two or more animals were the focus (wildlife)	
13.	Central focus is on which animal species? (to be collapsed later)	
14.	Causes of endangered species problem or conflict in story. 0 no cause or conflict indicated 1 accident/ poor planning/ unintended government effect/inefficiency 2 manufacturing/ industry/ forestry/ mining/ hunting/ tourism 3 natural causes 4 habitat destruction due to human encroachment 5 government policy or over-regulation, standard routine 6 "man" or "humans" in general 7. Over zealous environmentalists 8. other (specify)	
15.	Conflict - Which groups disagree? Pick the most prominant 0 No apparent conflict 1. env. activists vs. pro-development 2 env. activists vs. gov. 3 env. activists vs. sci 4 bus. vs. gov. 5 pro-development vs. scientists 6 gov. vs. gov. (agency dispute) 7 sci. vs. sci 8. sci vs. gov 9. bus. vs. bus 10. other (specify)	
16.	Who should solve the problem? 0. No one indicated 1. Scientists 2. Environmental activists 3. Pro-development 4. Government 5. General public 6. other (specify)	
	Information from computer-assisted text analysis	
17.	Number of (1) scientist frame terms	
18.	Number of (2) environmental frame terms	
19.	Number of (3) pro-development/industry frame terms	
20.	Number of (4) regulators/law enforcement frame terms	
21.	Number of (5) legislator/exec.administrator frame terms	
22.	Number of (6) individual/other frame terms	
23.	From which category was the first interviewee? (from story transcription) 1 Scientist 2 Envmtal activist 3 Pro-development 4 Legislator 5 Regulator/law 6 Individual	
24.	Total interviews from each category? (from story transcription) 1 Sci 2 Env. act. 3 Bus. 4 Leg. 5 Reg. 6 Ind. 7 tie	cat. w/most

Information from Visual Examination

25.	**Animal picture type and length** Total time (in seconds) of all animal close-ups (Head and shoulder) tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
26.	Number of close-up shots of animals (total from var. 25)	
27.	Total time (in seconds) of full body shots tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
28.	Number of full-body shots of animals (total from var. 27)	
29.	Total time (in seconds) of wide shot/establish/contexts of animals in environment tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
30.	Number of wide shot/establish/contexts of animals in environment (total from var. 29)	
31.	Total time (in seconds) of all shots of animals. (recode to add var. 25,27 and 29)	
32.	Total number of all types of shots of animals. (recode to add var 26, 28 and 30)	
33.	**Scientists/Researcher picture type and length** Total time (in sec.) of CU (Head/shoulder) of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
34.	Number of CU shots of Scientists/Researchers. (total from var. 33)	
35.	Total time (in seconds) of full body shots of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
36.	Number of full-body shots of Scientists/Researchers. (total from var. 35)	
37.	Total time (in seconds) of wide shot/establish/contexts of Scientists/Researchers. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
38.	Number of wide shot/establish/contexts of Scientists/Researchers. (total from var. 37)	
39.	Total time (in seconds) of all shots of Scientist/Res. (recode to add var. 33,35 and 37)	
40.	Total number of all types of shots of Scientist/Rea. (recode to add var 34, 36 and 38)	
41.	**Environmentalist picture type and length** Total time (in seconds) of CU (Head and shoulder) of env. activists. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
42.	Number of CU shots of environmental activists. (total from var. 41)	
43.	Total time (in seconds) of full body shots tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
44.	Number of full-body shots of environmental activists. (total from var. 43)	
45.	Total time (in seconds) of wide shot/establish/contexts of environmental activists. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
46.	Number of wide shot/establish/contexts of environmental activists. (total from var. 45)	
47.	Total time (in secs.) of all shots of environmnetalists (recode to add var. 41,43 and 45)	
48.	Total number of all types of shots of animals. (recode to add var 42, 44 and 46.)	
49.	**Pro-development/Industry picture type and length** Total time (in sec.) of CU (Head and shoulder) of Pro-development/Industry. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
50.	Number of CU shots of Pro-development/Industry. (total from var. 49)	
51.	Total time (in seconds) of full body shots tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
52.	Number of full-body shots of Pro-development/Industry. (total from var. 51)	
53.	Total time (in seconds) of wide shot/establish/contexts of Pro-development/Industry. tally ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ =	
54.	Number of wide shot/establish/contexts of Pro-development/Industry. (total from var. 53)	
55.	Total time (in secs.) of all shots of Pro-development/Ind. (recode to add var. 49, 51 and 53)	
56.	Total number of all types of shots of Pro-development/Ind. (recode to add var 50, 52 and 54)	

57.	**Regulator/Law picture type and length** Total time (in sec.) of CU (Head and shoulder) of Regulator/Law. tally + + + + + + + + =	
58.	Number of CU shots of Regulator/Law. (total from var. 57)	
59.	Total time (in seconds) of full body shots of Regulator/Law. tally + + + + + + + + =	
60.	Number of full-body shots of Regulator/Law. (total from var. 59)	
61.	Total time (in seconds) of wide shot/establish/contexts of Regulator/Law. tally + + + + + + + + =	
62.	Number of wide shot/establish/contexts of Regulator/Law. (total from var. 61)	
63.	Total time (in secs.) of all shots of Regulators/Law (recode to add var. 57,59 and 61)	
64.	Total number of all types of shots of Regulator/Law (recode to add var 58, 60 and 62)	
65.	**Legislator/Adminstrative picture type and length** Total time (in sec.) of CU (Head and shoulder) of Legislator/Adm. tally + + + + + + + + =	
66.	Number of CU shots of Legislator/Adm. (total from var. 65)	
67.	Total time (in seconds) of full body shots of Legislator/Adm. tally + + + + + + + + =	
68.	Number of full-body shots of Legislator/Adm. (total from var. 67)	
69.	Total time (in seconds) of wide shot/establish/contexts of Legislator/Adm. tally + + + + + + + + =	
70.	Number of wide shot/establish/contexts of Legislator/Adm. (total from var.69)	
71.	Total time (in secs.) of all shots of Legilstors/Adm. (recode to add var. 65, 67 and 69)	
72.	Total number of all types of shots of Legislator/Adm (recode to add var 66, 68 and 70)	
73.	**Unaffiliated Individual/Other picture type and length** Total time (in sec.) of CU (Head/shoulder) of Unaffiliated Ind./Other tally + + + + + + + + =	
74.	Number of CU shots of Unaffiliated Ind./Other. (total from var. 73)	
75.	Total time (in seconds) of full body shots of Unaffiliated Ind./Other. tally + + + + + + + + =	
76.	Number of full-body shots of Unaffiliated Ind./Other. (total from var. 75)	
77.	Total time (in seconds) of wide shot/establish/contexts of Unaffiliated Ind./Other. tally + + + + + + + + =	
78.	Number of wide shot/establish/contexts of Unaffiliated Ind./Other. (total from var. 77)	
79.	Total time (in secs.) of all shots of Individual/Other. (recode to add var. 73, 75 and 77)	
80.	Total number of all types of shots of Indivdual/Other. (recode to add var 74, 76 and 78)	
81.	**Broadcaster picture type and length** Total time (in sec.) of on-set anchor reading - tally + + + =	
82.	Number of on-set shots of broadcasters (total from var. 81)	
83.	Total time (in sec.) of reporter standups - tally + + + =	
84.	Number of standup shots. (total from var. 83)	
85.	Total time (in sec.) of reporter reversal and reporter involvement shots. tally + + + + + + =	
86.	Number of shots of reporter in story. (total from var. 85)	
87.	Total time (in secs.) of all shots of broadcasters (recode to add var. 81, 83 and 85)	
88.	Total number of all types of shots of broadcasters (recode to add var 82, 84 and 86)	
89.	Total number of all types of shots in story (recode -add var. 32, 40, 48, 56, 64, 80, 88)	

Notes:

Sample Transcription of Story
with Claimsmaker Codes

#122*11/14/91*SALMON

$anch The great Pacific northwest is the focal point for another classic confrontation over the environment. As Jerry Bowen reports tonight saving the sockeye salmon could mean socking it to the wallets of consumers all over the country.

$rep Across the Pacific Northwest tonight consumers are wondering how much more they are going to be paying for hydro-electric power. Nationwide shoppers also have reason to wonder how much more they will be paying for produce grown with Columbia river water. Both as a result of today's decision to list the Snake River sockeye salmon as an endangered species.

$sotreg It's our goal certainly not to maintain museum fish, but to recover this species ultimately for the release in the wild.

$rep This is one of only 4 wild sockeye salmon to return to Idaho's Rector's Lake to spawn this year. Species that once numbered in the tens of thousands is now that close to extinction.

$sotreg It's the first sockeye that has gotten back at Sawtooth or at Redfish Lake for about 2 years.

$rep Government studies say the major problem is the obstacle posed by the series of locks and dams along the salmon's 900 mile migration route to the Pacific. Saving the salmon will likely require diverting some water now used for hydro-electric, farming and shipping. A potential nightmare that mirrors the battle between loggers and the spotted owl.

$sotbus The spotted owl is just an amateur, just that simple. It isn't even remotely close to what the salmons can do.

$rep The government must now work out an exact plan for saving the sockeye but it's only a first step and it's not the only species, three other strains of salmon are also under consideration for the endangered list. Jerry Bowen, CBS news, Los Angeles.

VITA

Jon M. Smith was born in Safford, Arizona, October 2, 1959. His family moved to Kailua, Hawaii when he was 5 years old and he completed high school there. He attended one year at Ricks College in Rexburg, Idaho in 1977 before working for two years in northern Chile as a church missionary. He earned a bachelor's in communication from Brigham Young University in 1983. That same year he started full-time employment as a television news photographer and editor for Bonneville International's Washington D. C. News Bureau where he covered Capital Hill, the White House and other east coast events such as space shuttle launches for KSL-TV in Salt Lake City and KIRO-TV in Seattle. In 1985 he accepted a transfer to open KSL-TV's Southern Utah News Bureau in Cedar City, Utah. In 1987 he moved to Orem to work in KSL's Central Utah News Bureau. In 1988 he left full-time television newswork to pursue a master's degree at Brigham Young University. He then completed the master's and accepted a position in the communication department at Southern Utah University, Cedar City, Utah. There he taught journalism, advertising, public relations, mass media, visual communications and television production courses. He has won several awards for documentary video production. In 1994 he took a two-year sabbatical and leave to complete doctoral course work at the University of Tennessee, Knoxville. In 1996 he returned ABD to Southern Utah University to continue teaching as an assistant professor and complete his dissertation concerning media coverage of environmental issues. He lives in Cedar City with his wife, Anne, and their four children.