PRESENTING WOLVES AS WOLVES: EDUCATIONAL OUTREACH IN THE

DEBATE ABOUT WOLF MANAGEMENT IN THE WEST

By

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Abstract

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Throughout history the fate of wolves has been a reflection of shifting beliefs about the environment. As United States citizens adopt values and laws to protect the environment and wildlife, the new ideas are often at odds with more traditional utilitarian values. Decades after their extirpation from the west, the reintroduction of gray wolves sparked controversy about wolf management. Like most environmental conflicts, the debate about wolf management in the west is riddled with scientific, social, and political complexities. Many groups have responded to the debate in an attempt to promote understanding and reduce conflict.

In light of the underlying values and the issues that emerge from the value-driven nature of the wolf management debate, I sought to identify the role of education in reducing conflict. I interviewed twenty individuals representing wildlife management agencies, organizations advocating wolf conservation, educational organizations, organizations advocating wolf delisting, and the media.

My interview analysis revealed many valuable insights into the educational outreach developed in response to the debate about wolf management. In particular,

environmental education serves as a means to present science alongside values, break down communication barriers, and create opportunities for unique learning experiences. By building upon the essential themes described in my interviews and the literature, I developed a contemporary paradigm to guide educators working in the midst of environmental controversy. Above all, educators must not only inform their audiences but also connect with them. As environmental controversies become more widespread with shifting value systems and limited resources, educators may use this new approach to foster understanding and reduce conflict.

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CHAPTER ONE

INTRODUCTION

Facts, fear, and fables coalesce to define the wolf. How would you respond if you came across wolf footprints while backpacking? What if a wolf were in your backyard, face to face with your beloved Fido? Most of us will never come so close to a wild wolf, yet we probably have fairly strong opinions about the reintroduction and management of wolves. Dread, fascination, hatred, and respect have embodied the relationship between humans and wolves throughout the centuries and around the globe.

What are those beliefs based upon? How much do we really know about wolves and from where did we learn it? Moreover, what do we know about the context of the wolf debate?

Wolves in the western United States have a tumultuous past, with their recovery rekindling even greater tensions. Misinformation paired with strong value systems have elevated the wolf onto a pedestal for some and descended it to the depths of hell for others. As westerners attempt to adjust to the wolf's return, the creature's mythical status does more harm than good. The reality of living with wolves may be unimaginable to many, but our understanding of wolves needs to be disconnected from the imagination. Enter the educator, responsible for helping people understand the wolf as a wild animal, neither evil nor good. Yet the role is not so simple because with wolves come highly charged emotions and unwavering values alongside scientific definitions.

The complexities of the controversy over wolf reintroduction and management in the west are both fascinating and mind-boggling. Many have devoted their lifetimes to

studying wolves in and of themselves, let alone the human dynamics of wolf reintroductions and management. Like most environmental conflicts, the wolf debate is multifaceted in its scientific, social, and political significance. For the countless groups and individuals who have devoted themselves to ensuring wolf recovery is or is not successful, there is much at stake. Indeed, most people involved at any level would likely say there is a lot on the line, be it resources, livelihoods, or nature itself.

In response to such a highly contentious issue are the individuals who act as liaisons between their groups and the public. Be it wildlife management agencies, environmental organizations, the media, hunting organizations, educational organizations, or livestock organizations, these groups must disseminate information about wolves to the public in order to achieve their goals. Nevertheless, these efforts may be complicated by the science, symbolism, politics, and values that define the wolf. Researching the outreach within the wolf debate is an excellent learning opportunity for individuals participating in environmental education in controversial situations. Yet little, if any, research has been done on the education efforts in the wolf debate. My research sought to explore wolf education and outreach programs in the west.

CHAPTER TWO

REVIEW OF THE LITERATURE

The Eradication of Wolves from the West

Europeans settling the western United States in the 1800s carried with them cultural beliefs and values alongside their supplies and belongings. Wilderness and wolves were long-standing symbols of all that was evil in the world, stemming from the Garden of Eden story and lessons taught in the Catholic church (Mech and Boitani 2003; Kleese 2002). As a result, overcoming the wild was a moral obligation as well as a means of survival. Additionally, prey animals were seen as helpless animals who God demanded to be protected from immoral predators, in particular wolves (Mighetto 1991).

Hatred and fear of the wolf were fueled by the belief that it was a despicable creature to be eliminated, along with snakes, bats, coyotes, and rats (Kellert et al. 1996). Furthermore, predator eradication was man's way of "imposing order and rectifying what was 'wrong' with nature" (Mighetto 1991, 84). Biologists and the government hopped on the bandwagon of predator loathing. Champion of the wilderness Theodore Roosevelt once called wolves "the beast of waste and desolation" (Kellert et al. 1996, 978). Even the president of the New York Zoological Society said there was "no creature more despicable" than the wolf (Kellert et al. 1996, 978). People were applying human ethical standards to the wolf, rather than viewing wolves as wild creatures without the capacity to make moral decisions. As a result, those perceptions of the wolf threatened the species' survival in an increasingly human-dominated world.

Domination over nature was deemed necessary for the survival and success of the western settlers, a viewpoint that continues among many westerners today. Humans saw themselves as superior to nature, which "exists primarily for the benefit of people" (Mighetto 1991, 120). The utilitarian values that guided the majority of actions in the 1800s and early 1900s did not necessarily consider the long term effects on ecosystems because there was little understanding of such a concept. Rather, the goals of conquering the west and its wilderness were achieved through grazing livestock, hunting ungulates, and natural resource extraction. Nevertheless, the Romantic Preservation movement was also beginning to take root in the late 1800s, led by author and naturalist John Muir.

In the early 1900s the government stepped in, for economic as well as moral reasons, to rid the west of the depredating wolves once and for all. During that time the United States Department of Agriculture's Bureau of Biological Survey stated, "Large predatory mammals, destructive of livestock and game, no longer have a place in our advancing civilization" (Kellert et al. 1996, 979). The agency exaggerated the number of livestock lost to depredation in order to continue its widespread extermination of wolves and gain additional support from ranchers and the public (Mech and Boitani 2003). Bounties and systematic killings quickly diminished the wolf population to virtual extinction throughout the west by the 1930s. Westerners could go about grazing their livestock, hunting ungulates, and extracting natural resources without the competition or threat of wolves. Thus, the extirpation of wolves was believed to have achieved the greatest good for the greatest number of people in the west and the nation as well.

The Emergence of Ecology

By the 1930s, most people in the United States tended to view the environment as a resource to be utilized for the welfare of its human inhabitants. Nature was a place that needed to be civilized and predator-free for the well being of people as well as the innocent creatures living within it. Indeed, man had been largely successful in removing the wild from the western wilderness. Wolves and other predators were out of the picture, ungulate numbers began to soar, livestock were safe on their grazing grounds, and men reigned over the conquered wilderness. It was not until the late 1930s that biologists began to study ecosystems as a whole rather than in parts.

With a newfound understanding of the interconnectedness of species and processes in nature, wildlife biologists finally started viewing wolves as a legitimate piece of the ecological puzzle rather than as an immoral fiend (Mech and Boitani 2003; Mighetto 1991). After years of favoring wolf eradication, Aldo Leopold was one of the first to recognize and address the impacts humans were having on the environment through agriculture, game management, and predator control (Leopold 1966). He argued that all elements of the biotic community have intricate ecological connections, and that nature holds intrinsic value as well as instrumental value (Mighetto 1991). Leopold helped spread a progressive concept of nature, suggesting that it ought to be conserved as a whole for more than utilitarian reasons, but also for nature's value in and of itself (Hargrove and Calicott 1990).

Aldo Leopold's ground-breaking assertions about the connections between the environment's stability and society's actions were quite controversial during his time. Nevertheless, his ideas about holistic environmental values focused upon the biotic

community as a whole slowly attracted followers (Light and Rolston 2003). The mindset about wilderness and predators began to shift as the scientific community learned more about ecosystems and its vital components. After decades of hatred towards wolves, biologists were studying the predator as a legitimate member of the biotic community (Mech and Boitani 2003). In 1944, Leopold proposed the restoration of wolves to Yellowstone National Park in order to return balance to its ungulate-dominated ecosystem (Mech and Boitani 2003).

Leopold encouraged decision making guided by a holistic approach, long term thinking, and ecological as well as social concerns (Sharpe at al. 2001). Driving this new value system were the all-too-real consequences of humans' unrelenting manipulation of the land, as evidenced by the Dust Bowl disaster in the 1930s (Mighetto 1991). Even so, in 1948 the director of the Biological Survey stated, "The ideal of ecological balance will not determine the kind of, extent of, and direction of predator control" (Mighetto 1991, 97). The Survey prioritized economics, and Leopold's ideas were rejected as sentimental because the field of ecosystem ecology had not yet been developed as a widely accepted science (Mighetto 1991). In spite of the challenges to holistic environmental values, the concept continued moving forward as the understanding of biotic communities grew.

As scientific knowledge developed among experts, the public became more interested in the environment and their place within it. People began valuing wilderness as a source of beauty and connection to the divine, ideas first promoted by John Muir and the Romantic Preservationists. Individuals also started to recognize the value of nature for the well being of its wild inhabitants as well as humans (Kellert et al. 1996). Human actions were wreaking havoc on the environment through industrial and chemical

innovations, and the destruction was coming full circle to destroy the lives of many creatures, human and nonhuman alike. By the 1960s, the environmental movement gained momentum as a response to these human-induced dangers as well as the growing acceptance of environmental conservation.

Legislation addressing concern for the environment filled the Federal Register throughout the 1970s. New knowledge fostered new values that demanded the protection of ecosystem stability, human health, and endangered species. The Endangered Species Act (ESA) was passed in 1973, directing the United States Fish and Wildlife Service (USFWS) to protect and recover endangered and threatened species (16 U.S.C. §§1531 et seq.). The law not only illustrated the nation's interest in the intrinsic value of endangered species, but also recognized the importance of all species within the ecological community (Sharpe et al. 2001). The ESA required the USFWS to consider the feasibility of restoring gray wolves, among many other species, to the nation's wild places. Nonetheless, many people in the west did not share the same sentiments because the wolf continued to symbolize the struggles westerners had succeeded against in order to make a living off the land (Kellert et al. 1996).

Gray Wolf Recovery in the Northern Rocky Mountains

The Endangered Species Act made the recovery of gray wolves in the Rocky Mountain region a legal as well as ethical responsibility. By the late 1980s, the U.S. Fish and Wildlife Service was considering the potential for wolf recovery in the western United States. The central question to the recovery was whether natural recovery should continue with wolf migration from Canada or a reintroduction ought to take place. Human manipulation of nature led to the extirpation of wolves, and many believed it

should also bring about the wolf's return to the west (Nie 2003). The 1994 Final

Environmental Impact Statement (FEIS) for the recovery of gray wolves in the northern

Rocky Mountains deemed reintroduction the preferred option because it would work

towards a recovery within the foreseeable future rather than the unknown future of

natural recovery (United States Fish and Wildlife Service and Department of Interior

1994).

The U.S. Fish and Wildlife Service sought a balance between scientific and social

issues in its decision to reintroduce wolves in 1995. The USFWS received over 160,000

responses during the public comment period for the FEIS. The concerns of local and

national citizens were addressed in the FEIS' Comments and Responses section (United

States Department of Fish and Wildlife Service and Department of Interior 1994). The

preparation of the FEIS and implementation of the preferred alternative "involved more

scientific inquiry, media coverage, public attention, and controversy than almost any

other North American natural resource issue" (Fritts et al.1997, 23).

Many residents near the reintroduction areas were less than enthusiastic about the

return of wolves. Nevertheless, the USFWS insisted on management policies that would

be more flexible than the ESA in order to deal with the problems wolves could bring,

including livestock depredation and limits to natural resource use (Fritts et al. 1997).

Under the 10(j) rule of the ESA, the reintroduced wolves were designated as a

nonessential experimental population, giving the USFWS the ability to manage the

wolves as a threatened rather than an endangered species (16 U.S.C. §1539(j)). Primm

and Clark (1996) suggest wildlife management must take into consideration a variety of

factors and perspectives in order to ensure endangered carnivore recovery will succeed.

It appears that the USFWS acknowledged the legal and biological aspects of wolf recovery alongside human needs and values.

The final rules for the reintroduction of gray wolves to Yellowstone National Park and central Idaho were published in the Federal Register on November 22, 1994 (50 CFR 17.40(i)) after Yellowstone National Park and central Idaho were designated as experimental population areas. (This created recovery areas in central Idaho, Yellowstone National Park, and Montana. To meet recovery goals, each of the three recovery areas needed to contain at least ten breeding pairs for three years in a row. Such a recovery would be demonstrated in a total population of at least three hundred individuals with genetic exchange occurring between the three recovery area populations. (United States Fish and Wildlife Service and Department of Interior 1994)) Overshadowing the progress toward implementing the reintroduction were several lawsuits. In the fall of 1994, the Sierra Club Legal Defense Fund and the American Farm Bureau Federation each filed suit against the Department of the Interior to challenge the relocation of wolves and the experimental population designation (Idaho Department of Fish and Game 2008). Both lawsuits attempting to halt the reintroduction were overruled, and the reintroduction continued as planned.

Fifteen wolves were reintroduced to central Idaho, while fourteen wolves were released into Yellowstone National Park in January 1995 (Bangs and Fritts 1996). The states were not involved in the implementation of the reintroduction. The Nez Perce tribe had received the USFWS' approval for its management plan and worked extensively with the agency in the wolf recovery process (Bangs and Fritts 1996). Meanwhile, the Idaho Legislature reversed the prohibition of the state's participation in wolf recovery, thus

allowing the Idaho Department of Fish and Game (IDFG) to prepare a wolf management

plan (Idaho Department of Fish and Game 2008). During Idaho's preparation process,

the wolves were thriving beyond expectations and the metapopulation appeared to have

reached the USFWS' recovery goals by 2002. Nevertheless, Idaho, Wyoming, and

Montana had not submitted acceptable management plans to the USFWS, so federal

management continued. It took sixteen drafts and eight years before the Idaho

Legislature accepted a state management plan in 2002 (Idaho Department of Fish and

Game 2008).

The USFWS published its intent to reclassify the northern Rocky Mountain gray

wolf nonessential experimental population as a distinct population segment and to delist

the population in 2003 (69 FR 15879). In January 2004, the USFWS accepted Idaho and

Montana's management plans, but Wyoming continued to resist writing a plan the

USFWS would deem satisfactory (Idaho Department of Fish and Game 2008). By 2005,

the USFWS changed the final rules for northern Rocky Mountain gray wolf management,

allowing states with approved management plans to request the opportunity to take a

larger role in managing the wolf population (50 CFR 17.84(n)). As a result, the states

had more management responsibility, but they were still under the restrictions of the ESA

and its 10(j) rule. By 2007, the northern Rocky Mountain gray wolf population estimate

exceeded 1,500 individuals (United States Fish and Wildlife Service et al. 2008).

A proposal to delist the northern Rocky Mountain gray wolf population was

published in the Federal Register on January 28, 2008. The Earthjustice Legal Defense

Fund, representing the Center for Biological Diversity, Defenders of Wildlife, Help Our

Wolves Live, Humane Society of the United States, Sierra Club, Jackson Hole

Conservation Alliance, and Natural Resources Defense Council, filed suit against the Secretary of the Interior on the same date. The lawsuit charged the USFWS with violating the ESA in the proposal to delist. Specifically, the groups were concerned that the wolves would not receive adequate protection once they were delisted. (Earthjustice Legal Defense Fund 2008) On February 28, 2008, the final rule removing the northern Rocky Mountain gray wolf population from the endangered species list was published in the Federal Register (73 FR 10514). The delisting took effect on March 28, 2008, under the condition that Wyoming would abide by its recently accepted management plan.

On July 18, 2008, a preliminary injunction was issued by the U.S. Federal District Court in Missoula, Montana, temporarily restoring the northern Rocky Mountain gray wolf population's designation as an endangered species (United States Fish and Wildlife Service 2008). In order to meet the recovery goals in the 1994 FEIS, the wolf population needed to have "sufficient representation, resilience, and redundancy for long term conservation" (United States Fish and Wildlife Service and Department of Interior 1994, 33). The subpopulation goals of ten breeding pairs or one hundred individuals in each state (or 300 total) had been reached in 2002, with approximately 1,500 total wolves recorded in 2007. Nevertheless, the federal judge expressed concern about a lack of adequate genetic exchange between the three subpopulations, in addition to the wolf's shoot-on-sight predator designation throughout a considerable portion of Wyoming (Molloy 2008). The federal judge officially returned the northern Rocky Mountain gray wolf to the endangered species list on October 14, 2008 (Brown 2008).

Values Driving the Conflict

Many groups have a vested interest in the recovery of wolves, and those interests continue to conflict. The values motivating people's positions vary considerably, leaving one to ask how effective communication about the issue might be achieved. Mech and Boitani (2003) have seen that people's beliefs often impact wolf populations more than biological facts. Indeed, the U.S. Fish and Wildlife Service's reams of data from wolf research cannot be relied upon as the end-all solution to the problem. Moreover, the dependability of theorizing about the survival needs of a population is always questionable because of changes in habitat, human impact, and other unforeseen events (Primm and Clark 1996). Such uncertainties significantly influenced the delisting of the northern Rocky Mountain gray wolf population. The USFWS was put in the difficult position of balancing scientific theory and knowledge, social considerations, and the responsibility of protecting an endangered species, whose very existence relied on the agency's actions.

The lines between the social and natural world are certainly more blurred than absolute, and the USFWS perceived a multidisciplinary approach as offering wolves the best chance for successful species recovery. Indeed, environmental conflicts are often political issues more than scientific ones (Davis 2001), and the USFWS demonstrated its awareness of this issue. The proposed action's objective was "to establish viable wolf populations by the year 2002 while managing the wolves to the greatest extent possible under the ESA in order to tend to the needs and concerns of people who live in the restoration areas" (Fritts et al. 1997, 10-11). Nevertheless, people's beliefs about the wolf and the role of the federal government run deep. If acceptance of the USFWS's

recovery plan required one to compromise his values, the agency was unlikely to receive the public's support (Nie 2003). Nearly all of the various perspectives in the wolf controversy disapprove of some aspect of the recovery and management of wolves, but their reasons are diverse.

Those challenging the recovery of wolves in the west are primarily comprised of rural residents whose opposition is motivated by the preservation of their utilitarian-based livelihoods (Nie 2003). Included in those groups are individuals who are more likely to deal directly with wolves on a regular basis, such as ranchers, hunters, and residents of areas inhabited by wolves (Williams et al. 2002). Those resisting the return of wolves often view the act as a threat to their values and interests. In essence, the wolves become competition to those already living off the land (Nie 2003). Wolves not only impact livestock and wild ungulate populations; they also threaten private property rights and federal land use (Wilson 1997).

These concerns, founded on economic costs and the resulting loss of one's livelihood, may be mitigated through economic gains resulting from wolf-stimulated tourism (Rasker and Hackman 1996). Nevertheless, dismissing those concerns ignores the local people's connection to the land and commitment to their way of life, intensified by generations of struggle. The wolf embodies many of the hardships overcome. Accordingly, the wolf's return is a symbolic and tangible threat to the western way of life. Such points of view made it difficult, if not impossible to reach a decision that these groups approved, even though the U.S. Fish and Wildlife Service incorporated the 10(j) rule's management flexibility into the recovery plan.

Many individuals who support wolf recovery in the west reside in urban areas and do not have to deal with the consequences of the reintroduction (Nie 2003; Williams et al. 2002). Within those groups are individuals who value wolves for aesthetic, ecological, symbolic, or spiritual reasons (Nie 2003). Accordingly, the value the nation has placed on endangered species is represented in the Endangered Species Act, which translates ethics into law. By combining the ethical responsibility to recover endangered species with the scientific knowledge of ecosystem ecology, the USFWS faced a complex conundrum. To some, ethics ought to be the main force directing the implementation of the ESA, but to others science should be the primary driver. The challenge of uniting the two encourages interdisciplinary thinking, but it also fosters complexity and conflict in the decision making process.

Environmental groups and the public are generally concerned about ecosystems as well, but they also seek protection for individual animals. Additionally, they are motivated by moral reasons, emotional and spiritual responses to nature, and the intrinsic value of nature (Nie 2003). The Nez Perce and other tribes in the recovery area value wolves for their ecological role in nature, but most significantly for their symbolic role within the tribe's culture. The wolf's return completed a spiritual circle that had been broken with the loss of wolves (Nie 2003). Although the groups in favor of wolf recovery received what they desired, the flexibility towards wolf management is unacceptable to many. For environmental groups challenging the plan's management flexibility, wolves remain a romantic idea rather than a physical presence in one's back yard.

Strong moral and emotional connections compel many wolf advocates in their cause, reflecting drastic change in the interpretation of the wolf. Admirable qualities such as devotion to family (or the pack) and bravery are used to justify the protection of every individual wolf (Mighetto 1991). The extraordinary contrast from the prevailing attitude of fear and hatred less than a century ago shows that the wolf is continuously being redefined. Today, many interpretations exist, creating difficult challenges for groups attempting to educate the public about wolves.

Dynamics of Value-Driven Conflicts

The diversity of the value systems throughout society has expanded over time. Traditional values have been preserved while new values have emerged with the shifting perspectives of scientists and biologists. The utilitarian value system that once dominated American culture now shares the stage with those who value nature for intrinsic reasons or for ecosystem preservation. With such a variety of beliefs guiding our actions and preferences, it is no surprise the debate about wolves in the west continues to ignite controversy. An individual's commitment to his values is rooted in his culture, social experiences, and environment (Rokeach 1979). As a result, people live by their values not only to represent themselves but to judge and respond to others, with those corresponding actions further validating their values (Rokeach 1979). The implications for value-driven conflicts are broad, as values can be used as weapons against the opposition or motivation to fight for a cause (Rokeach 1979).

The human desire to exist in or near the natural world, whether for utilitarian, aesthetic, or spiritual reasons, often devastates the very landscapes to which people are devoted. Although wolves are capable of living in environments that have been

manipulated by people (Mech and Boitani 2003), "our current embrace of the wild is laying the basis for myriad conflicts between the wild and humans" (Dizard 1999, 209). Norton et al. (1995) state that the "moral responsibility now lies with the interpopulation level on the intergenerational scale, managing humans more than wildlife" (108). The U.S. Fish and Wildlife Service recognized this, so they have regulated human actions against wolves and managed wolves causing harm to human interests in order to minimize conflicts (Bangs et al. 2004). Mech and Boitani (2003) contend that successful wolf conservation relies on the tolerance demonstrated by the acceptance of wolf protection along with wolf management. In addition, individuals must acknowledge the complexities of the values involved in the situation and the need to move beyond a purely science-based rationality in problem solving (Primm 1996). This multidisciplinary understanding of the conflict needs to be present at the local as well as the national level to ensure the continued survival of wolves.

Value-Driven Conflict and Educational Outreach

In order to establish such awareness, many groups are disseminating information about wolves. Some are advocating wolf recovery while others favor delisting. Several groups seek to simply build understanding about wolves. Motivations aside, U.S. citizens are legally obligated to recover the gray wolf in an increasingly human-dominated landscape. Culture, values, and myths challenge the wolf's recovery. Whether they be extremely positive or negative beliefs about wolves or overly simplified views of the conflict, misperceptions stand in the way of achieving the tolerance necessary for successful wolf conservation (Mech and Boitani 2003). By learning more about the

approaches used by wolf educators and communicators, we may discover new outreach methods for complex environmental controversies.

Multiple Ways of Knowing

When learning about a controversial environmental issue, one must acknowledge that environmental conflicts are often a question of values rather than interests. The complexities of the wolf debate are far-reaching, and it is foolish to assume there are any simple solutions, especially when communicating with those involved. Renee Askins (2002) speaks to this discovery,

> When I began working on wolf recovery I believed it was wolves we were arguing about; I thought conservationists could win the debates if we just assimilated enough solid biological information, filed enough successful lawsuits, or marshaled enough political support. I no longer believe that. These confrontations did not center on biological facts or abstract laws. These were moral questions, and moral questions are resolved on a cultural level, within the context of personal emotion: love, passion, and anger. (173)

Much of the emotions carrying environmental conflicts arise from the meanings we associate with a place and the identities we have established through our experiences with those places (Senecah 2004). Individuals whose connection with the land is through ranching or hunting may perceive the presence of wolves very differently than people who experience nature as a spiritual entity or recreational source. Communication needs to reflect the variety of values audience members may possess so as not to offend or fail to reach audience members altogether.

Educational outreach cannot disregard the historical and social context in which an environmental controversy is taking place. Cantrill (1993) suggests communication must be relatable in order for the audience members to connect with the message and reflect on it. To make the presentation relevant to the individual, the educator ought to openly acknowledge the many ways one could perceive a situation without expressing

judgment on them (Guerrier et al. 1995; Cantrill 1993). In addition, discussing less common perspectives is important (Jickling 2003), as it suggests there is no best way of viewing the environmental issue (Guerrier et al. 1995). By considering the various ways people perceive a given situation, the educator may avoid misunderstandings and negative responses from the audience (Saunders et al. 2005). Moreover, challenging the audience to contemplate other world views in comparison to their own may help lend to a deeper understanding of the controversy at hand.

Impacts of Literature and Media

Individuals are not limited to their own direct experiences in developing their views of the world, as exposure to literature and media cannot be discounted. By reading literary works and newspapers, viewing films and television, and browsing the internet, society can expand its knowledge and understanding of the world more than ever before. According to Cantrill (1993), one's experiences combine with his contact with books, newspapers, television, and the internet to establish his perceptions and beliefs about environmental issues. This may be problematic when one considers the internet is plagued by misinformation and the average individual may not be able to discern fact from fiction. Indeed, Peterson (1998) suggests that the typical person often perceives information in literature as a truthful depiction of reality. In environmental conflicts where the distinctions between myth and fact are confusing and difficult to establish, misinformation spreads like wildfire. Nevertheless, Hoage (1989) suggests popular literature and documentaries have also played a productive role in the wolf conflict, providing more information about wolves to the general public than professional

literature has. Even so, educators must take into account the positive as well as the negative depictions of wolves fostered by all forms of media.

Such simplistic presentations of information are common in newspaper coverage in particular. According to Nie (2008), the media use the "adversarial frame" where "two dueling perspectives" are portrayed as "neatly defined and diametrically opposed" in the midst of an "irreconcilable conflict" (31). This depiction is misleading, specifically when "a simplistic and dichotomous frame limits the range of perspectives and alternatives presented to the public, thus obscuring whatever shared values and common ground might exist among stakeholders" (Nie 2008, 31). To make matters worse, journalists often quote individuals who hold the most extreme views in order to "infotain" their audience, thus aggravating the conflict (Nie 2008, 31). Unfortunately, people are often led to believe that the media is an unbiased source of information, so they may not read the articles critically. Misleading media coverage is clearly an obstacle environmental education must overcome.

Suggested Methods for Environmental Education

Little research has investigated environmental education and outreach in informal settings. Since the immediate and long term effects of outreach on views or behaviors are incredibly difficult to measure, environmental education evaluation is problematic. Nonetheless, we can take cues from educators' perceptions of their work. Experiential education, the use of stories, and exposure to unique experiences appear to be valuable approaches to educational outreach.

Experiential education, centered on the audience becoming actively involved in learning about an issue, seems to have positive as well as negative aspects. Pomerantz

and Blanchard's (1992) study of wildlife management agencies' education programs found that participatory learning yielded the best results. Similarly, Cantrill (1993) discusses the powerful impact once-in-a-lifetime opportunities have on one's long term beliefs about nature. Such findings suggest that effective outreach must provide unique experiences to motivate its audience, but Guerrier et al. (1995) warn us of the unforeseen consequences of experiential education. When environmental issues are experienced as uncommon or foreign events, individuals may feel disconnected from environmental problems upon returning to their everyday realities (Guerrier et al. 1995). To counter such feelings, Guerrier et al. (1995) suggest environmental issues be presented as questions of science (exposed to in the field) as well as social problems occurring in the world we experience every day. For those who cannot experience the issue directly, Peterson (1998) and DeYoung and Monroe (1996) discuss the strength of narratives and story telling in presenting information in a form that is accessible and memorable to the audience.

Dialogue to Foster Understanding

In controversial situations, productive dialogue often builds to unconstructive shouting then fades to silence as individuals possessing different views refuse to talk to one another. Educators face the difficult task of encouraging communication that explores the conflict and builds understanding (Fiske 2002). The simple act of listening to audience members provides insights into individuals' concerns, which others in the audience may consider and the educator can use to develop more applicable educational outreach (Pomegrantz and Blanchard 1992; Rothman 1997). By expressing interest in

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individuals' comments and questions, the educator also discourages feelings of anger,

suspicion, and mistrust the audience could experience (Carpenter and Kennedy 2001).

Nonetheless, the educator must be careful not to disregard the strong emotions

individuals have invested in the controversy. Askins (2002) warns,

> Reduce talk about people's lives and their sense of loss… to talk of benefits,
> resources, game units, and control actions and you've succeeded in sterilizing and
> abstracting the debate. The vocabulary shapes the discussion to fit a certain
> worldview, and that worldview seems too often to forget that people and their
> fears and their rage are a part of the equation. Sterilized language deepens the
> rage because it essentially ignores it – as if by ignoring it we will cause it to
> disappear. Many of us want to discount the rage. We want to expose how
> irrational and unreasonable the other side's assumptions are. The point, however,
> is not whether their pain is logical or rational, but that it exists. We will not abate
> this rage by trying to discount it or challenge it. (175)

Acknowledgement of the legitimacy of all views and definitions of truth involved in the

wolf debate is critical to avoid marginalizing groups, as they often respond with more

extreme anti-environmental communications (Peterson 1998, 381). By listening to and

sharing stories from all perspectives, educators may help their audiences understand the

motivations driving the conflict so they may step away from simplistic stereotypes and

judgments (Rothman 1997; Peterson 1998; Cantrill 1993; Askins 2002).

Through fair representation of the many views of the wolf and the conflict

surrounding it, educators can build a positive reputation with the general public. Peters et

al. (1997) found that when government agencies openly communicate the threats an

action may create, the public grants the agency trust and credibility. In a situation as

contentious as wolf reintroduction and management, the public's trust is critical to

achieve the ultimate goal of wolf recovery. Accordingly, educators will be most effective

in promoting understanding of the situation when they gain the public's trust. With

skeptics and extreme positions often driving the debate, educators need to win over their

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audiences with an effective campaign involving straight talk and dependability (Newton 2001). Honest communication reflecting the many realities and complexities of the wolf debate is the most promising method for educators to reach their audiences.

Science in Multidisciplinary Environmental Education

It is clear that the debate about wolves hovers in the social sphere as much as, if not more than, the scientific sphere. Environmental education, especially wolf education, requires a multidisciplinary approach to understanding a complex issue connected to science, society, politics, and the law. Lansing (2002) suggests that politics' role in predator recovery and management is extensive, while Nie (2002) says deliberation about wolf management must go beyond science and economics. People are in the center of the controversy, and the social concerns cannot be ignored. Pomerantz and Blanchard (1992) found that the most effective wildlife education programs foster understanding of the biological and human factors along with their interactions. Moreover, simplistic representation of the wolf debate only promotes polarization and stereotypes (Jones 2002).

Educators must also take into account the many ways people interpret information. People with science-based backgrounds, including environmental advocates, tend to assume an approach based on facts and rational thinking will persuade individuals (Cantril 1993), but people are often more concerned with personal impacts and the broader picture (Saunders et al. 2005). Educators ought to develop their outreach in innovative ways that reach the most diverse audiences, including people who value knowledge based on experience, religion, culture, tradition, or science (Senecah 2003). In addition, the wolf debate should be made accessible and meaningful by discussing the

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interplay between the scientific and social worlds in our everyday lives (Guerrier et al. 1995). Education has a critical role to play in the wolf debate, offering new knowledge to challenge the common stereotypes and assumptions that have existed for generations (Hoage 1989).

Education may help break the cycle of misinformation, but it cannot resolve questions of values and emotions. By including the discussion of values alongside scientific information, social and ethical concerns could be considered together with the ecological requirements of the wolf (Mech and Boitani 2003). After all, "science cannot settle questions of meaning… or whether we should be doing these things in the first place" (Nie 2002, 67). Presenting the differences and similarities between the many perspectives in a respectful way, while acknowledging the absence of objective interpretations of the conflict, suggests to the audience there is no right or wrong answer to the wolf debate (Palamar 2007). Scientific explanations of wolves paired with recognition of the values driving the conflict promote the most comprehensive understanding of the controversy surrounding wolf management.

Research Question

Based upon the information derived from the literature regarding the debate about wolf management, the characteristics of value-driven environmental conflicts, and environmental education, I developed the following research question.

> What is the role of education in reducing conflict in light of the issues emerging from the value-based nature of the wolf management debate?

CHAPTER THREE

RESEARCH METHODS

My interest in environmental education and outreach alongside wildlife conservation led me to this research study. After arriving in Pullman in January 2007, my exposure to the debate about gray wolf management in the west grew and I became quite fascinated with it. Many of my research papers in my classes focused upon the issue, and it soon became apparent to me just how enthralled I was by the intensity and complexity of the west's wolf conflict. By August 2007, with the enthusiastic encouragement of my committee chair, Emmett Fiske, I decided to pursue my interests by researching educational outreach in the wolf management debate.

Building My Knowledge Base

I delved deeply into the controversy about wolf management in my course work in order to build my knowledge and understanding of the issue. By studying the changes to vegetation and biodiversity observed in Yellowstone National Park after the reintroduction of wolves, my Ecosystem Ecology class helped me develop an appreciation for the wolf's ecological role. Resolving Environmental Conflicts gave me the opportunity to gain respect and understanding for the many perspectives within the wolf management debate, but also to explore the social aspects of dealing with controversial environmental issues. The political and legal realm of gray wolf reintroduction and management were unfamiliar to me, but my research in Environmental Assessment brought me considerable enlightenment. Through an in-depth exploration of the ethics of the wolf debate, my Environmental Ethics final project gave me further

insight into the conflict's complexities. With the knowledge gathered over the past three semesters, I finally felt prepared to commence my research in summer 2008.

Methodology

In order to address my research question, I believed one-on-one interviews with individuals implementing wolf educational outreach would be the most productive methodology. Using such a methodology, I would be able to obtain explanations of their groups' efforts as well as the subjects' perspectives of their work. I had taken a Qualitative Methods Practicum in preparation for such an undertaking, so I felt I had the skills and knowledge to successfully complete the research.

Even though I would not begin my research until summer, I began planning and laying the groundwork for my research early in the year. I submitted a Human Subjects Form to the Washington State University Institutional Review Board and received a Certificate of Exemption in late January 2008 (See Appendix A). Throughout the following months I gathered information about potential interview subjects. I found the names of the education and outreach directors for educational facilities, environmental groups, government agencies, hunting groups, livestock associations, media, and tribes involved in disseminating information of any form about wolves. The majority of the contact information was obtained from the groups' websites. This could be considered a limitation of the sampling process, as there may have been groups without internet representation.

Sampling Process

My sampling method was non-probability purposive, as I sought out individuals who were involved in educational outreach about wolves in the west. The majority of the

subjects were selected through typical sampling, representing what I believed to be the most typical members of the target population. Nevertheless, I thought it was important to include some maximum variation sampling because of the polarized nature of the debate about wolves. As a result, I attempted to find individuals who represented what some may consider an extreme in the target population, such as groups opposed to the presence of wolves or those advocating wolf delisting.

The scheduling of interviews was random, as I made a list of potential contacts in no particular order as I found information about them on the internet or interviewees suggested I speak with them. I began calling potential subjects in early June as was convenient. Interviews were scheduled according to the subject's availability. Since I was relying on telephone calls and emails to contact the individuals I hoped to interview, I did not have control of who responded to my correspondence. Such circumstances were a limitation of the sampling process. The majority of the individuals I attempted to contact did not answer their phones, so I left messages. Eight individuals did not return my calls and four did not reply to email messages. This contributed to an additional weakness of my study by limiting the maximum variation sampling to two interviews with groups advocating wolf delisting. Fifteen interviews were scheduled via the phone and five were planned through email correspondence.

Once I had about fifteen interviews completed, I had a very difficult time scheduling additional interviews. Eight individuals did not respond to the multiple phone messages I left, while four did not reply to multiple email messages. Two interviews that were scheduled did not take place because the individuals did not answer their phones and did not respond to my messages. I had exhausted the list of contacts I had built and

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was unable to find additional groups in Idaho involved with wolf educational outreach. In order to achieve a larger sample size, I decided to attempt reaching several groups in Montana and Wyoming. By the end of the summer, I managed to complete twenty interviews, but scheduling the last five was incredibly tedious and, it seemed at times, a matter of luck. With my twentieth interview, I was satisfied with the representation within my sample. Of the thirty four individuals I attempted to contact, twenty interviews took place (See Table 1).

Total contact attempts	34
No response to phone messages	8
No reply to email messages	4
Unsuccessful scheduled interviews	2
Successful interviews scheduled via phone conversation	15
Successful interviews scheduled via email correspondence	5
Total successful interviews	20

Table 1. I attempted to contact thirty four individuals for interviews, with twenty of those contacts resulting in successful interviews. Eight attempts by phone and four by email did not receive a response. Two individuals did not answer their phones at the scheduled interview time. Fifteen successful interviews were scheduled via phone conversations and five via email correspondence.

Interview Research Design

The research design included one-on-one interviews, either in-person or over the phone. I had planned to perform all of the interviews face-to-face, but high gas prices proved to be an obstacle. Most of the groups were located in southern Idaho and I did not have the resources to make multiple trips or spend several weeks in the area. As a result, in-person interviews were determined by proximity, and I met with individuals located within 150 miles of Pullman, Washington. The Human Subjects Form I submitted in January did not include permission for phone interviews, so I requested an amendment to

the form, which was approved in late June (See Appendix B). I began conducting in-person interviews in early June and phone interviews in late June 2008.

Interviews were conducted in a semi-structured fashion. I began the interview by introducing myself and explaining my research more in depth than I had when I scheduled the interview. I made a point of explaining that I was seeking to gain an understanding of the various approaches for educational outreach and did not have an agenda beyond gaining knowledge about the situation. A verbal consent script was read (See Appendix C) and the interview was recorded when the subject gave me permission to do so. Subjects' names and groups were not recorded to ensure confidentiality.

I used a list of questions to help direct the interview (See Appendices D and E), but I followed up with more specific questions in response to the subject's answers. Categories of inquiry included general background information about the subject and his group; the group's goals and methods in wolf communication; perceived effectiveness of the educational outreach implemented; integration of scientific and value-based information; perception of media; and improvements, challenges, and rewards in educational outreach. The interviews lasted between thirty minutes and two hours, depending on the subject's schedule and how much time he could spend talking with me.

Coding Interviewees into Analysis Groups

Interview recordings and notes were transcribed within two days of the interview. The transcription was coded based on the type of group the interviewee represented. I coded the groups into five categories (See Table 2).

Group Description	Group Category	Number of Interviews
Local or national nongovernmental organizations involved in litigation and/or advocacy for wolf conservation	Conservation	7
Local or national nongovernmental organizations involved in litigation and/or advocacy for wolf delisting	Delisting	2
Organizations with missions to educate; No participation in litigation or advocacy	Education	4
Journalists reporting for local newspapers on wolf issues	Media	3
State, federal, or tribal groups funded by the government to manage the wolf population	Agency	4

Table 2. Interviews were categorized according to the interviewee's group description. Seven interviews were with individuals from local or national nongovernmental organizations involved in litigation and/or advocacy for wolf conservation, coded "Conservation." Two interviews were with representatives from local or national nongovernmental organizations involved in litigation and/or advocacy for wolf delisting, coded as "Delisting." Four interviews, coded as "Education," were with organizations involved in education without litigation or advocacy. Three interviews, with journalists reporting for local newspapers on wolf issues, were coded as "Media." Four interviews were with state, federal, or tribal groups funded by the government to manage the wolf population, coded "Agency."

Local and national environmental nongovernmental organizations that actively participate in litigation and/or advocacy regarding wolf conservation were coded as "Conservation" groups. Seven of the interviews were coded as such. Local and national nongovernmental organizations actively participating in litigation and/or advocacy to delist the gray wolf in the west and promote wolf control were coded as "Delisting" groups. Two individuals from "Delisting" groups granted me interviews. Facilities and groups whose missions are strictly to educate the public or visitors and do not participate in litigation or advocacy received the coding of "Education" groups. I conducted

interviews with four such groups. A "Media" coding was given to journalists whose assignments include communicating the wolf debate to the public and who are employed by a local newspaper. Three journalists agreed to be interviewed for my research. Individuals working for state, federal, or tribal groups that are funded by state or federal government to manage the wolf population and deal with human-wolf conflict were coded as "Wildlife Management Agency." Four of the interviews were coded as "Agency."

Analysis Process

The interviews were transcribed along with the notes I took during and after the interviews. I also kept a journal to record the research process as well as my thoughts and reflections as I progressed through the project. Within the week of each interview, I read through the transcription, highlighting the parts of the discussion that addressed my research question. I read through the transcriptions a second time, making notes along the margins to indicate the subject of each highlighted section. At the same time, I recorded in my journal additional questions and revelations that emerged from my analysis. Once I had categorized the transcription sections that were linked to my research question, I copied and pasted each of the highlighted sections into a new document for each category. Then I read through the documents for each category, highlighting the segments that I thought best captured the points the interviewees articulated. In addition, I took notes to capture the array of responses about each particular topic. Subcategory documents were then created using the noteworthy quotes pulled from the category documents. Nonetheless, the subcategories were a result of

slow and careful analysis followed by the selection of quotes that addressed my research

question and represented the five interview groups.

CHAPTER FOUR

INTERVIEW DISCOVERIES

My goal in conducting the interviews was to identify the role of education in reducing conflict in light of the issues emerging from the value-based nature of the debate about wolf management. The complexities of environmental communication and outreach seem to be magnified in situations surrounded by such controversy and defined by values. Since I did not know what the perspectives and experiences of my interviewees were, my questions were general and open-ended. I viewed my subjects as the experts and only through their explanations could I gain insight into how they viewed their work as well as the debate about wolves itself. By building my understanding of the interviewees and their experiences, I hoped to acquire knowledge which could be applied to other environmental education and outreach efforts.

The interviews yielded information about the perspectives of individuals intimately involved in educating the public about wolves. Being immersed in such a highly contentious topic on a daily basis, my subjects had unique perspectives of the wolf debate. While the information I had accumulated could give me insight into my subjects' interpretations of their actions and of the circumstances around them, they could not be viewed as "fact" or "reality" per se. I needed to keep this in mind to prevent the confrontational and controversial nature of the issue from overwhelming me. It also helped illustrate the degree to which wolves are interpreted on an individual basis with a diversity of reactions.

Those diverse responses were expressed throughout the interviews. Several themes related to my research question emerged from my analysis, which will be the focus in discussing my findings. Explanations about the groups' goals for their outreach efforts provided insight into the strategies the groups use to deal with the value-driven conflict. Issues brought about by the value-based nature of the debate were illustrated through the challenges that the educators described. The educators' descriptions of their communication methods and strategies revealed several themes that indicate education's role in reducing conflict and building understanding. Education may be used to portray the complexities of the debate by presenting scientific information alongside social definitions. In addition, education serves as a medium to break through the communication barriers within the wolf management debate. Finally, education creates the opportunity for individuals to learn and experience something they normally would not, opening the door to greater understanding of the conflict's complexities.

Group Goals Within the Conflict

Although the groups represented in the interviews fill a variety of roles in the debate about wolf management, each of the groups participate in communicating information about wolves to the public. Since I spoke with conservation groups, education groups, management agencies, groups advocating delisting, and the media, the ultimate goals of their educational outreach varied. Indeed, the educational goals illustrate the roles each of the groups play within the conflict as well as the strategies each group uses to address the conflict.

While the conservation groups seek to achieve wolf restoration through their outreach efforts, education groups are more focused on building appreciation for wolves

themselves. At the same time, agencies work to build tolerance of wolves through the dissemination of information. The media wants to communicate the big picture of the debate to the public. Contrary to the other groups, the delisting groups that I interviewed do not believe education helps their cause, so they rely on litigation to achieve their goal of delisting the wolf.

Among the individuals representing conservation groups, all of them spoke of the importance of education efforts but also cited the inevitability of litigation. The ultimate goal for each of the organizations is to restore a viable population of wolves to the west. Interviewees suggested that education can help them achieve such a goal in a variety of ways. The conservation groups want to reach the general public as well as their members and political decision makers. Many interviewees stated that building awareness among the public about the issues regarding wolves is a necessary task because of a considerable lack of knowledge. Conservation 1 stated, "Education is an important aspect to it, trying to get people to understand or at least expose them to it so they can make their own decisions." The need for a more comprehensive understanding of the implications of the growing wolf presence was discussed as well. According to Conservation 4, "Our job is basically to help educate the public about some of the opportunities and challenges of wolf management." Others believe the public will be more supportive of wolf restoration if wolves are described as having a specific purpose in the ecosystem. For example, Conservation 7 explained, "What we do is try to promote the restoration of wolves by remaining consistent in educating about their ecological effectiveness."

Education groups described themselves as neutral parties, seeking to inform the public about wolf behavior in order to build appreciation for the animal. Since they do

not participate in litigation about the wolf, they do not believe they support a political

agenda. By presenting information about wolves and providing a chance for visitors to

see a wolf, the groups view their efforts as an opportunity for people to experience

something they normally would not. "Our primary mission is to give an opportunity for

people to see wolves up close, to observe them, and hopefully come to some sort of

appreciation of the species" (Education 3). Education 4 explained,

> Our goal was to lend a more realistic understanding of wolves, that they are just
> animals doing what they need to get by…Our belief was that from an
> understanding comes appreciation. When somebody really appreciates a species
> or a resource they're a lot more likely to take care of it.

Nevertheless, educators also acknowledged the limitations of their efforts. "I'm not here

to change anybody's mind, just give an opportunity to learn more about them if they want

to" (Education 2).

Although wildlife management agencies seek to build tolerance for wolves by

explaining the facts about wolves, they do so by providing options for dealing with

conflict as well. Accordingly, restoration is the goal, but the means by which to achieve

it does not necessarily entail promoting appreciation. The interviewees explained that

management requires impartiality in the midst of overwhelming emotions. Agency 1

stated, "I try to leave my talks with no one knowing what side of the fence I'm on. Pro-

wolf groups think I'm a wolf killer and anti-wolf groups thing I'm a wolf hugger." Since

the agencies deal with wolf-human conflicts, they seek to educate people about how to

deal with wolves while establishing a relationship of respect with the public. Agency 3

explained,

> What you basically need to do is have people tolerant enough of wolves so they
> won't illegally kill too many… We were always just, you know, the whole truth
> and nothing but the truth kind of stuff. Good, bad, and the ugly. And the biggest
> reason we did that was so we could listen to people so we could learn.

The media find themselves in a position unique from the other groups presented thus far. Since the general public acquires most of its information about the wolf debate from media sources, journalists seek ways to communicate the situation as unbiased outsiders. Each of the journalists interviewed has different goals for educating the public about the bigger picture of wolf management. Media 1 tends to quote the key players, including the more controversial figures, to inform people and "to spark someone to go out and learn more and get slightly more involved." In contrast, Media 3 excludes the extremes to demonstrate "it's not so cut and dry." He went on to say, "My goal is to show there's a lot more middle ground on this issue than the few voices you really hear on the issue would really indicate" (Media 3). Media 2 is more concerned with educating people who deal with wolves on a regular basis, such as livestock producers, to help them prepare for or respond to wolves. "My goal is to get actual on the ground information out about wolves… [It is] kind of a balancing act to some of the other reporting that I see that's done out there" (Media 2). Depending on one's perspective, one could say the three methods complement one another by comprehensively informing the public or that they contradict each other to create a mixed message.

While conservation groups, education groups, agencies, and media all strive to educate people about wolves for various reasons, the individuals representing the delisting groups stated that their groups completely bypass education in working to achieve their goal of delisting the wolf. Delisting 1 said he is ultimately "standing up for the poor man who's being violated by the left," referring to hunters, livestock producers, and local people dealing with wolf impacts on a daily basis. By delisting wolves through litigation and giving state wildlife management agencies control over the populations, he

can achieve that goal. Nonetheless, he does not think gaining public support through education is an option. Delisting 2 explained, "As far as trying to educate, it's a waste of time, I think. It's pointless because it's hard to get the story from the other side. I think in the end the only way to deal with it is hopefully the courts will take the law as written and enforce it." While the conservation groups see an advantage to coupling educational outreach with litigation, the delisting groups have abandoned education because they do not feel their voices are being heard.

Wolf restoration, appreciation for wolves, tolerance, and grasping the big picture were explained as goals that are achievable through educational outreach. At the same time, the delisting group representatives believe litigation is the only option for achieving their goal of delisting the wolf. The roles that the groups play within the conflict are widespread, illustrating the complexities of the conflict. Likewise, the groups implement a variety of strategies to deal with the value-driven debate about wolf management. Some groups use education to promote wolf restoration, appreciation for wolves, tolerance, or the big picture, while others turn to litigation. Whatever the case may be, the groups are implementing the strategies that they believe most effectively address the debate about wolf management.

Issues Emerging from the Value-Driven Nature of the Debate

Individuals implementing educational outreach about wolves face a variety of issues that arise from the value-driven nature of the debate. My interviewees discussed many circumstances that make their jobs exceptionally difficult. The strong opinions and emotions wolves engender, the perceived agendas and actions of other groups and the media, the enduring myths and misinformation surrounding wolves, the concept of

changing people's minds, and gauging effectiveness are the primary challenges wolf educators face.

Every subject referred to the difficulties of providing education and outreach about an issue that stirs up such intense emotions grounded in a multitude of unyielding opinions. Many of the subjects indicated that fixed ideas often inhibit their ability to carry on a rational conversation with their audience members. Since the issue of wolf management is so intimately connected to people's values, it is not surprising that educators encounter individuals who are defensive or difficult to speak with (Rothman 1997). Agency 1 noted from his experiences, "One thinks that wolves walk on water and are basically humans in fur coats, and the other thinks that wolves are Satan's spawn and they shouldn't be here because they're the work of the devil." Education 3 explained his approach in addressing the complex situation,

> We also need to understand that, as wolf educators, so much of what we discuss is emotions and cultural ideas and folklore and all these different things; that when someone comes and visits our facility and sees a wolf, they already in their mind have a preconceived notion of what a wolf is…I think every wolf educator needs to realize that there is already in each individual inherent biases about wolves, and those biases are built based upon where they're from, what they've read in books, what they've seen in television and movies, what their lifestyle and economic background is, where they come from as far as their ancestry and ethnicity.

An individual's opinions about wolves develop from his experiences, culture, and values. When individuals learn about wildlife management actions such as wolf reintroduction or lethal control, they may perceive such actions as challenging the validity of their values (Carpenter and Kennedy 2001; O'Leary and Bingham 2007). For many, the commitment to their beliefs is incredibly passionate and uncompromising. Conservation 4 elaborated,

> Wolves make people go crazy. It's really hard to have a rational conversation about wolves because people's blood pressure goes through the roof no matter which side you're on. So that's the biggest challenge, that wolves have this mythical status on either side and it's really tough to have an objective conversation about wolves. And that is going to remain a challenge.

Similarly, Agency 3 said, "The wolf issue becomes so symbolic that it overrides common sense or decency, and you have to roll with that."

Since the topic of wolves invokes such highly charged emotion stemming from one's culture and values, the concept of changing the minds of audience members was discussed by several interviewees. Two individuals (one from conservation and one from education) believe they have changed people's minds about wolves through unique experiences, such as wolf encounters. Nevertheless, five subjects (one conservation, two education and two agency) stated they cannot change anyone's mind about wolves and do not try to. Agency 4 explained, "I learned a long time ago that when it comes to wolves, people seem to have their minds pretty firmly made up one way or the other and you're not going to change anybody's mind and I gave up trying to do that…People have this notion of what wolves are and what they do and that's how it is." Along the same line, Education 2 said,

> I'm not going to change anybody's mind. I never come in and say that if you don't like wolves I'm going to make you like wolves when you leave. You can't make anybody change their mind. …For those who are maybe on the fence line, we use our opportunity for educating to provide the clarification of factual information versus infactual.

Indeed, Cantrill (1993) warns against presenting one perspective as better than another when communicating with an audience. Rather than attempting to convince people about how they should feel, it appears that simple exposure to information is the preferred approach for several of the subjects.

Interviewees said myths and naïveté also obscure their efforts. The majority of my subjects referred to the need to address misinformation about wolves within all viewpoints. Conservation 3 explained, "Almost every argument you hear that's in favor of hunting and trying to eliminate wolves is based on mythology, it's not based in fact whatsoever. It's just perception, and rallying around what seems to be the people who are being negatively impacted by wolves." Misconceptions were of concern to Conservation 4, as he said, "Our members are somewhat naïve about some of the impacts that wolves can have, particularly on pets. A lot of folks aren't aware of the conflicts and potential conflicts between wolves and pet dogs." Addressing the misinformation is problematic, especially when it appears on the internet. Conservation 7 explained, "It's very difficult because the internet is an ocean and we are a small voice in a vast ocean." Countering the misunderstandings face-to-face is also a tricky task. Education 3 noted, "One of the greatest challenges is dealing with people and saying, I understand this is where you've read it, this is what you know, but this is what we know based on these studies that are done here and the science behind it." The subjects referred to a variety of misinformation, both positive and negative towards wolves, which they address on a regular basis.

Many of the interviewees perceived the actions of other groups as challenges to accomplishing their own goals. Such an issue emerges in conflicts when values are at odds and individuals feel the validity of their values are being questioned or threatened (Carpenter and Kennedy 2001; O'Leary and Bingham 2007). Both the conservation groups and the delisting groups accused each other of using wolves to advance their own agenda and accused the media of unfair representation. Agency 3 explained, "What you

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have with the wolf education issues is that it is often blended into some other kind of agenda. You know, other wildlife restoration agendas, outsiders telling us what to do, states rights agendas, private property rights things, gun control." Delisting 2 suggested conservation groups are "pandering to the public's ignorance about the facts and looking to gain money." Yet Conservation 7 said, "There are interests that benefit from demonizing the wolf and those interests do so despite the facts." Nie (2008) points out the problems of "vilifying" (30) other groups and commending one's own group, noting that such actions only create a "spiraling effect" (30) of accusatory communication that promotes further conflict.

The divergent groups also addressed the media as an issue that has emerged because of the value-based nature of the debate. Conservation 3 suggested, "I think the media has a strangle hold on this issue. It's really an uphill battle to convince people that wolves should not be delisted. The papers have really heard the anti-wolf message more clearly than they've heard the pro-wolf message, and they've bought into it." At the same time, Delisting 1 noted, "Just look at the commentary in the media. It is an exclusive parading out of experts from the Center for Biological Diversity, Defenders of Wildlife, Sierra Club, left groups." Agency 2 also identified the media's contribution to the polarization of the wolf issue, stating,

> The one thing that's still kind of disturbing to me is every now and then a wolf depredation takes place and somehow the media hears about it and they report it like it was a big crime….My point is, it's just not news, you know. When the media gets ahold of it, even though they try hard they can't help but get the story wrong [laughs]. That kind of throws gasoline on the passions on both sides.

All groups seem to agree that the media's unbalanced coverage of wolves needs to be addressed, but for different reasons.

The majority of the interviewees discussed the difficulties of gauging the effectiveness of their educational outreach in such a complex value-driven conflict. Seven said they simply do not know how to determine how effective they are. Given the previous discussions of strong opinions and changing minds, educators discussed the elusiveness of evaluating their effectiveness in this controversial debate. Only one representative described a quantitative assessment of an outreach project. Agency 3 explained,

> Before wolves were put in Yellowstone there was a survey done and 19% of Wyoming residents believed wolves were a significant threat to human safety. We distributed ¾ of a million newspaper inserts, we did all these talks and hearings and media. …Ten years later after wolves were introduced we did another survey. Twenty percent of Wyoming residents believed wolves are a significant threat to human safety, which of course they aren't. But that just shows you that basically all the outreach didn't make any difference at all because 20% of people believe the government just lies. So some things you really can't affect. The strong emotion, you just have to realize sometimes facts don't resolve feelings.

Other educators consider their audience members on an individual basis when assessing effectiveness. Seven interviewees indicated that they use audience member responses, questions, and enthusiasm to gauge the effectiveness of their methods. Education 2 said, "I judge by watching the behaviors of the individuals, watching their interests, questions, watching their faces, talking to them when we first get back to the visitor's center when they're all excited and stuff like that. 'We're coming back.' 'This is so great.' 'We'll remember this forever.'" Similarly, Conservation 4 noted, "A lot of that is just the palpable excitement when people see wolves. Or when someone sees a wolf track or puts their hand inside a wolf track. The sense of excitement from people, their enthusiasm, how they describe what a great time they had." Even though they may not have official

quantitative evaluations for measuring their effectiveness, many educators find ways to gauge how well they are reaching their audiences.

The Role of Education in Reducing Conflict and Building Understanding

The interview groups seek to achieve the goals of wolf restoration or delisting; building appreciation or tolerance, or presenting the bigger picture. Although their goals are diverse, they are all struggling with the same issues while attempting to reduce the conflict, whether through education, litigation, or a combination of the two. In light of the underlying values and corresponding issues in the wolf management debate, three themes regarding education's role in reducing conflict emerged from my interview analysis. Within the wolf management debate, education serves as a means to present scientific information alongside social definitions, break through communication barriers, and create opportunities for unique learning experiences. Together, these themes illustrate the various ways educators are using education to diminish conflict and build understanding about wolves and the complexities contributing to the controversy.

The Presentation of Scientific Information Alongside Social Definitions

In a debate that is defined by biological facts as well as values and politics, groups attempting to provide educational outreach face the difficult decision of how to talk about wolves. All of my subjects said they present biological facts and science-based information to their audiences. Education 3 explained, "What we first want to do, first and foremost, is just present wolves as wolves. Talk about what they are, how they live, just putting that information out that helps set the stage for any further discussions." Although several of my subjects acknowledged the social aspects of the controversy, they do not present the social side of the debate to their audiences. Some have found that

discussing values is not productive, so they rely solely on the facts. Nevertheless, audiences may not be able to relate to a basic presentation of the science behind wolf behavior and management (Cantrill 1993; Saunders et al. 2005; Senecah 2003). Conservation 6 acknowledged this issue, explaining, "Facts don't speak for themselves, that's a common failing of groups who think people are simply rational actors and that if they allay forward the facts, so to speak, then people will then understand. You have to interpret the facts for people, so that's what we do." The interpretations may vary, however, depending on the fact-interpreter's biases and ultimate outreach goals.

Six individuals said they focus on the facts and leave the discussion of social issues out of their communication efforts, including three agencies, two media, and one conservation group. Agency 2 explained, "Usually if you present facts, nobody can argue with them. They may not like them, but they can't argue with them. So that's why we try to deal with just fact-based information and try to keep the emotion out of it." Similarly, Media 3 has witnessed the problems that ensue when the conversation turns towards values, so he primarily uses information from management agencies in his articles. He pointed out,

> I don't really go for the jugular if I've got a great quote that would maybe stir emotions up. Even the ones that I do where I'm really trying to go down the middle, even those will stir up the emotions. But I don't think it really adds anything to the debate to just go for these really controversial figures. And that's just kind of my view on it, how I cover it. (Media 3)

Agency 4 also talked about relying on facts in his communications, stating,

> It certainly seems to me that it's more powerful to present data to them and say, 'This is how it is' or 'This is our interpretation of this data we've collected,' as opposed to trying to argue in favor of wolves by 'They're a pretty animal' and 'They have value to people for whatever reasons.' In that regard, I think the science is a stronger argument for wolves and for why wolves should have been recovered in Idaho and the northern Rockies.

Conservation 5 elaborated on a similar approach:

> Whenever we can we try to talk about the truth and come up with the fact that wolves are only responsible for less that .1 % of livestock deaths here in the northern Rockies and that the elk and deer populations are the best they've been for many years despite wolves being on the landscape. So we certainly try whenever we can to try and counter those myths with the scientific data that's out there.

These individuals' reliance on scientific information alone may affect the effectiveness of their outreach, especially when their audiences do not rely solely on science or facts in defining their worlds (Cantrill 1993; Senecah 2003).

Although all of my interviewees use biological facts and scientific information to build understanding about wolves, fourteen believe a discussion of values is necessary to establish a full comprehension of the debate about wolves. These individuals (representing all five groups) frame the conflict as a consequence of society's diverse values, opening the conversation to the many complexities involved. According to Rothman (1997), identity-based conflicts are difficult to define because they "arise from the depths of the human heart rather than the material world" (11). In addition, identity-based conflicts are "rooted in…the threats to…people's collective need for dignity, recognition, safety, control, purpose, and efficacy" (6-7). Education within identity-based or value-based conflict would most certainly be neglecting to address the lion's share of the issue if it did not discuss the social definitions involved. This perception was demonstrated among representatives from six conservation groups, four education groups, one agency group, one media group, and two delisting groups.

Many of the interviewees believe that acknowledgement and open discussion of the value-driven nature of the conflict may encourage people to reflect on the complexity of the debate about wolves. Some educators think that by promoting dialogue about the

conflict, individuals may come to realize the issue is not as cut and dry as many assume.

Education 3 noted,

> We try to be very mindful to try to present the fact that there are all these different viewpoints. That people have such a varied response to wolves and such a varied approach to dealing with wolves, of thinking about wolves…. We try to be very inclusive, to try to understand and be empathetic to how they feel about wolves, but also to present a whole gamut of options, of ideas, of how others might feel about wolves.

Such an approach is critical because when a group feels its identity is being questioned or

challenged, more conflict and distrust is generated (O'Leary and Bingham 2007;

Carpenter and Kennedy 2001). Similarly, Media 1 discussed the need to acknowledge

the validity of all the perspectives involved in the wolf debate, no matter what value

system they represent.

> The problem is, those folks who aren't real extreme aren't the major players in this…I'm trying to find that line between talking to people because they're the major folks involved and keeping it from becoming this circus instead of a discussion. I don't think the people I've talked to have quite crossed the line yet of their views not being worth it because they just sit and spout inanities the whole time. They still have very real discussions and points about what they're trying to make. (Media 1)

Agency 3 also explained the importance of considering the human element when

providing outreach:

> The key is that wolf issues are about symbolism, values, perceptions. And they're not about a scientist getting in a white coat and telling you, 'Oh, wolves eat twelve pounds a day.' That doesn't make you like them or dislike them. You like them or dislike them because of how you view the world. (Agency 3)

He went on to explain the flaw in relying solely on facts in educational efforts and the

implications associated with it.

> 'Are you telling me that my family values, my culture, and my tradition is wrong?' That's the question. Am I telling some guy, 'Yeah, the biggest wolf only weighed 130 pounds'? It's totally mismatched. The facts don't have anything to do with resolving those strong symbolic emotions. So recognizing that helps you deal with that stuff. And it's not just wolf haters. It's wolf lovers, too. (Agency 3)

Delisting 1 also explained how the debate about wolves is not only about biological facts and scientific explanations. He believes "the civil rights of those dealing with wolves every day are being violated by those who don't live here. The wolf densities are being used against ranchers, hunters, and other local people, not the wolf itself" (Delisting 1). Such a perspective is likely common throughout the rural west, and most of the educators believe a regurgitation of facts will do little to promote productive dialogue with individuals holding those views. To effectively communicate the complexities of a conflict, educators must understand and discuss the biological and social factors involved as well as their interactions (Pomerantz and Blanchard 1992).

Creating the Opportunity for Unique Learning Experiences

Most of the groups are creating opportunities for unique learning experiences through their educational outreach efforts. By making those opportunities available to diverse audiences, individuals are able to experience something they would normally not have access to. The educators explained that such experiences open the door to a more comprehensive understanding of the conflict. Providing access to new information and experiences helps individuals learn about the perspectives within the conflict that are beyond their own everyday experiences.

Although all of the representatives from the agency, conservation, and education groups give some form of presentation, education is reaching beyond the traditional slide show. One-on-one discussions provide the opportunity to make a connection with the individual and build a sense of trust. Experiential education gives people the opportunity to come into contact with wolf habitat. Similarly, wolf encounters bring people face-to-face with a wolf, offering a once-in-a-lifetime experience. Finally, group websites open

access to an audience larger than ever before. By providing these unique learning experiences, the groups are fostering opportunities for individuals to develop a broader understanding of the wolf management debate.

Presentations by conservation groups, education groups, and agencies take a variety of forms. Slide shows, videos, demonstrations, and hands-on activities are common. Many of the interviewees said the question and answer period after the presentation is the most beneficial for everyone involved. One-on-one educational outreach work was discussed by three conservation groups and two agencies. When the opportunity presents itself, those interviewees make an effort to speak with people on an individual basis. Conservation 5 said he primarily works with people in the field, "doing things with people who are actually affected by wolves." Agency 4 referred to similar experiences: "Occasionally when I'm out in the field doing what I'm paid to do, you run into folks that want to know what you're doing and why you're doing it, and that always presents an opportunity to kind of spread some information out there." Similarly, Pomerantz and Blanchard (1992) discuss the importance of listening to and addressing people's concerns in building a relationship of trust with the public.

Besides talking with people who live or work in wolf habitat, several groups are targeting people who would not normally have the opportunity to witness a wolf. Four conservation groups offer "wolf viewing hikes" (Conservation 4) or "wolf watching tours" (Conservation 5), but their objectives vary. While Conservation 4 hopes his audience will have the "chance of at least seeing a wolf," Conservation 5 wants his audience to be aware of the perspectives of people living in wolf territory. He explained,

> We hope to take them out to the areas we have people participating so they can see what people are doing on the ground to learn to live with wolves. Because a lot of pro-wolf supporters think that the producer and rancher out here are stuck and complaining and not doing anything to protect their livestock. And that's not the case, a lot of them are. (Conservation 5)

In addition, two education groups have designed their facilities to preserve natural wolf habitat for visitors to experience. The effort is an attempt to connect wolf survival to habitat protection. All of these uncommon experiences will most likely be memorable to audience members (Cantrill 1993). Nevertheless, Conservation 5's approach (described above) may be the most promising because it demonstrates the connections between the scientific definitions of wolves and the social consequences of wolf recovery (Guerrier et al. 1995).

Visitors to two of the education groups' facilities have the opportunity to observe wolves in a natural setting. The other two education groups offer wolf encounters, giving their programs to groups throughout the region. Education 2 elaborated,

> Being able to see a live animal is a lot more effective that looking at a book or watching the TV. I think that's one of the reasons our facility and other facilities that take care of captive wolves do so well is because people have an opportunity of seeing an animal that if you were in the wild you would normally not see.

Creating the opportunity for the audience to connect with a wolf is important in reaching visitors, as Education 3 explained:

> A lot of it's an emotional reaction to them. But we just want to have the wolves right there in front of them and it really makes a huge difference, an amazing impact because of that. From there we have lots of different opportunities to do what we can do to enhance the visitor's experience and learn about the connection to wolves.

Education 1 also talked about the influence of encountering a live wolf: "People love to see the wolf, be able to pet the wolf, take pictures with him. That is probably the number one thing that is most effective that stands out in our programs." Moreover, Cantrill

(1993) emphasizes the powerful impact such an extraordinary experience has on an individual's perspectives of an environmental issue.

Finally, the internet has recently emerged as a new tool for educational outreach. All of the groups, including conservation, education, delisting, media, and agencies, have websites that address wolf questions in some form. Three interviewees from conservation groups, one from an education group, and two from the media described their websites as a communication method. Two conservation group representatives discussed the use of blogs as a primary form of outreach. Such forums offer the opportunity to debate the issues in a format accessible to a global audience. Conservation 7 noted, "The strategy that I've used is a lot of blogging, which is heavily read by decision makers and staff in Congress, land use agencies, wildlife agencies at the state and federal level as well as journalists at the national level." Media 2 uses the internet to address what she sees as the need for a more balanced representation of "people on the ground," "whether it is the actual hunters who are out after wolves or the actual ranchers who are having wolf problems." Her group's website provides people the chance to learn about a perspective of the conflict that is often sensationalized or dismissed altogether. These groups take advantage of the opportunity to reach a wider, more diverse audience through their internet communications.

Presentations, one-on-one discussions, experiential learning, websites, and news articles are all being implemented in an attempt to educate individuals about the wolf management debate. By creating opportunities for people to think outside the box or experience something out of the ordinary, the interviewees are using education as a tool to build understanding and decrease conflict. Nevertheless, the educators also implement

a variety of communication strategies to help connect with more audience members and strengthen the impact of their educational efforts.

Breaking Through Communication Barriers

The interviewees employ various strategies to break through communication barriers and connect with their audiences. Several approaches to overcoming the obstacles associated with value-driven conflicts were described. The majority of my subjects see open communication between different viewpoints as a promising approach to productive educational outreach. Alongside the promotion of dialogue, several individuals use humor and stories to connect with their audiences. Nevertheless, some of the groups are frustrated with what they perceive as a lack of progress in the wolf recovery and/or delisting process. Interviewees representing those groups do not believe dialogue with people possessing different views is an option for their outreach efforts. Instead, they use more confrontational communication methods. However the groups choose to communicate with their audiences, the interviewees were all confident that their efforts were helping them achieve their goals.

A few of the interviewees do not see education as a vehicle for breaking through communication barriers. Among the individuals who did not express support for open dialogue were representatives of two conservation groups and two delisting groups. Unsuccessful or discouraging efforts in the past had led these interviewees to lose confidence in the idea of open communication to promote understanding. Instead, their groups participate in aggressive litigation and accusatory communications. Groups who believe their values are being compromised and do not trust other players in the controversy often turn to litigation as their best and only option (O'Leary and Bingham

2007; Nie 2008). Delisting 2 explained, "You know, it's gotten to the point where there's no dialogue and our dialogue is not welcome. So the only way to deal with this is through the courts." Conservation 7 had the same attitude, suggesting, "There's no reasoning with these people if you've ever sat through a meeting. They just don't understand what we value."

In response to the discouraging encounters, two conservation groups developed rather aggressive strategies to communicate their cause. When referring to the blog on his group's website, Conservation 6 said, "We'd like to try to marginalize them the way they marginalize us…They're so far out to the right, you know, they don't make any sense. So we're kind of tarring them, trying to make them look bad." Conservation 7 discussed his group's role within the wolf conservation advocacy community, "We take the more confrontational approach, which I think is more important to talk about the political realities that are happening with regard to wolf management and that there are things that need to be addressed." Nevertheless, Rothman (1997) warns against this "closed-minded perspective" and encourages "analytic empathy" "as a vehicle to enable disputants to view each other's aggression as at least partially similar to their own - as reactively motivated due to threats and frustrations of essential needs and values" (44).

While the previous groups believe in the strength of their confrontational communications paired with litigation, most of the subjects I interviewed think respectful discussion about wolves yields the most encouraging results. Dialogue not only promotes credibility and trust but also helps overcome or prevent anger and suspicion (Carpenter and Kennedy 2001; Peters et al. 1997). Conservation 4 discussed the need to communicate in spite of the polarizing circumstances, noting,

> I think improving the dialogue between the ranchers and the conservationists and the hunting organizations is really important so that we all understand each other's perspectives. We may not agree with those perspectives but at least we can understand where they're based out of. That's important in proceeding ahead.

Agency 4 also elaborated on the value of keeping the lines of communication between interest groups open. By promoting a respectful and nonjudgmental atmosphere, he helps people cope with the realities of wolf depredation:

> When you come on a scene where a rancher or sheep operator has dead livestock, they're not very happy and you've got to take a little abuse and let them say their peace. Then just do the best you can to try and work with them. Outline the options of what we can do to prevent this kind of thing in the future and just let them know that you're on their side…You just take your initial beating and do what you can to let them know that you're in it with their best interest at heart. (Agency 4)

Others also talked about the need to create a hospitable environment where people feel comfortable discussing a topic that many people avoid. Conservation 2 explained,

> It's not hit them with all your strategies and all your ideas about how you think it should go, but let them till the soil and make it fertile. Then you can throw your seeds in there. I think it tends to work better that way, although that's not as direct an approach as a lot of NGOs like to take.

Agency 3 also provides opportunities for the audience to make considerable contributions to the conversation, where "they're telling you exactly what's on their mind and that gives you a chance to learn and adapt the program to what people are concerned and caring about." The educators work to establish rapport with their audience members by listening and responding to concerns, which is critical when the educator is seen as an outsider (Askins 2002).

Since the interviewees are often encountering their audiences for the first and only time while addressing a contentious value-driven conflict, it may be difficult to demonstrate a welcoming and respectful attitude that fosters trust and credibility. Several individuals discussed specific strategies which help them break through the

communication barriers with their audiences. Agency 3 uses humor in his interactions

with the public, stating,

> A lot of the wolf stuff gets pretty preachy sometimes, from people from either side, because of the strong emotion involved. So they'll only tell the things they think are good about wolves or only the things that are bad about wolves. And they're always pretty serious like they're going to save the planet or something. And I think a little bit of humor helps make people more human. And it allows people a little bit more room to either joke back or kind of break the ice to communicate.

Some of the communicators described how they are responsible for setting the mood for

their presentations, so a positive response from the audience opens the door for

interactive education. Some of my subjects tell stories to capture the audience's attention

and present information in a relatable form. Conservation 2 explained,

> I think it has to do a lot with descriptive language when you're making people really feel or sense the place or wildlife you're talking about, and feeling some connection to it or connecting it to their own experiences. Whereas if you just hit them straight with scientific dialogue that's pretty dry and purposely emotionless, you oftentimes lose people that way. I think you have to very consciously intermesh all of those things.

Education 4 believes pairing humor and stories helps him connect with his audience. He

explained his approach, noting,

> If you can give them a reason to laugh, it floods them with a sense of relief and they are yours for the rest of the program. If you set them at ease and make them feel comfortable, they will enjoy themselves and they then will remember things so much more…If you can give them something to laugh at, especially in regards to the issue that they're being polarized by, then you disarm it. You make things more relaxed.

Education 4 later suggested,

> The more serious a matter seems to be, the more often people neglect telling stories…You look at major religions, the way information was portrayed was through stories. Buddha, Jesus, Mohammad, they're going out and telling stories. They're not just issuing edicts and spewing out rules and regulations, they're telling stories. And people whose information is remembered, they did it by telling a story.

Four of my subjects discussed humor or story telling as essential strategies for productive communication and education, especially with issues as contentious and nerve-rattling as wolf management. Moreover, stories provide a gateway to communicating about complex problems that are defined by science alongside deep-rooted values (Peterson 1998; DeYoung and Monroe 1996).

The educators' perspectives of the need to break through communication barriers differ, as do their strategies to overcome the issues associated with value-driven conflict. Four interviewees avoid dialogue with those holding different views of the conflict, focusing on litigation and confrontational communication instead. Nevertheless, most of my subjects described the positive aspects of open dialogue, such as overcoming stereotypes, building understanding, and promoting trust. In addition to dialogue, several individuals use humor and stories to connect with their audiences in their efforts to promote understanding and reduce conflict.

CHAPTER FIVE

IMPLICATIONS FOR ENVIRONMENTAL EDUCATION AND OUTREACH

Educational outreach plays an important role in fostering understanding and reducing conflict in environmental controversies. Within the wolf management debate, education serves as a means to present scientific information alongside social definitions, break through communication barriers, and create opportunities for unique learning experiences. In order to fulfill its role, education must not only inform but also connect with individuals through dialogue, humor, stories, unique experiences, and multidisciplinary presentations. Some of these communication methods have been evaluated or suggested in the literature, but others may be less known or more out of the ordinary. The insights that emerged from my interview analysis are worth consideration by those implementing environmental education to promote understanding and diminish conflict. By building upon the essential themes described in my interview data and the literature, I developed a contemporary paradigm for maximizing the effectiveness of educational outreach in environmental conflicts (See Figure 1).
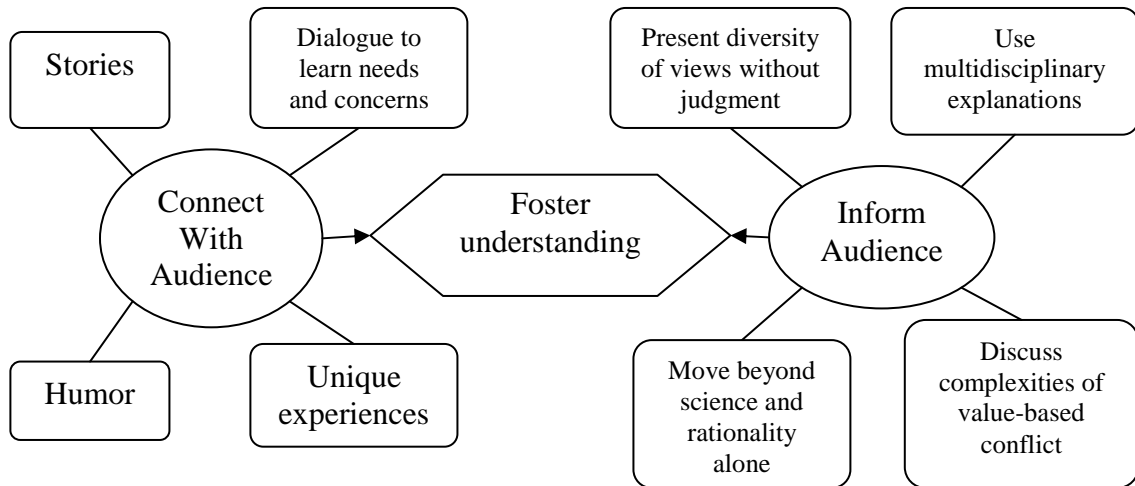
Figure 1. My interview and literature analyses yielded suggestions for a new paradigm to maximize the effectiveness of educational outreach in environmental conflicts.

First and foremost, a value-driven environmental controversy cannot be viewed in simplistic terms, nor can it be defined by science and rationality alone. The educator who familiarizes himself with a given situation, using a multidisciplinary approach, will establish the most comprehensive understanding on which to base his communication methods. By learning about the many ways of defining the conflict, a more inclusive view of the controversy will emerge, including the scientific, political, economic, social, and symbolic meanings driving the debate. When educators present a more holistic perspective of the situation, more members of the audience will feel as if their concerns are being addressed.

Simplistic views of environmental conflicts are often just as harmful as simplified methods of communication. The presentation of facts and scientific information is most commonly relied upon by educators, but we must recognize the rarity of individuals who use science alone to define their worlds. A regurgitation of the biological facts and scientific evidence behind an issue will leave little impact on most individuals. The faulty assumption that rationality reigns supreme must be overcome to reach more

people. Not to mention the fact that most environmental controversies are driven by values and symbolism just as much as interests and science. Today's educators must step beyond the comfort zone of science and rationality and acknowledge the values and social issues at the heart of the conflict.

A wide array of values and identities are linked to environmental conflicts. Communicators who are aware of the controversy's diverse value systems and the often impenetrable commitment to those values have the best opportunity to reach their audiences. Accordingly, respectful dialogue between the educator and the audience, as well as amongst the audience members, helps promote an atmosphere of trust. Such trust is imperative in a controversial environmental debate where mistrust is plentiful. By presenting the many viewpoints of the environmental conflict without preference or judgment, the communicator illustrates the complexities of the people involved and sheds light on why the conflict persists.

While a balanced presentation of information may appeal to audience members, the educator cannot ignore the need to connect with them as well. By building connections to individuals' experiences, interests, and values, the issue becomes personally relevant. Humor, stories, and unique experiences have been shown to capture the audience's attention, break through communication barriers, and create long-lasting impacts to individuals' perceptions of environmental issues. Such strategies are rarely heard of, but ought to be implemented more often, especially in intense conflicts where tensions are high. A story to show the similarities among people, an opportunity to laugh, or a chance to witness something extraordinary may be help create an atmosphere more conducive to learning.

Effective educational outreach is more important now than ever before. Environmental conflicts will intensify as diverse values emerge and resources become increasingly limited. Education plays a vital role in promoting understanding and reducing conflict in environmental controversies. It serves as a means of presenting science alongside social definitions, breaking through communication barriers, and creating the opportunity for unique learning experiences. Environmental conflicts may persist without resolution, but education will endure as well, fostering understanding and tolerance.

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APPENDIX

CERTIFICATE OF EXEMPTION

MEMORANDUM

TO: EMMETT FISKE and Audrey Willard,

FROM: Malathi Jandhyala(for) Kris Miller, Chair, WSU Institutional Review Board (3005)

DATE: 1/29/2008

SUBJECT: Certification of Exemption, IRB Number 10219-001

Based on the Exemption Determination Application submitted for the study titled Community Educational Outreach Efforts in Gray Wolf Population Management Controversy, and assigned IRB # 10219, the WSU Institutional Review Board has determined that the study satisfies the criteria for Exempt Research contained in 45CFR 46.

Exempt certification does not relieve the investigator from the responsibility of providing continuing attention to protection of human subjects participating in the study and adherence to ethical standards for research involving human participants.

This certification is valid only for the study protocol as it was submitted to the IRB. Studies certified as Exempt are not subject to annual review. If any changes are made to the study protocol, you must submit the changes to the IRB for determination that the study remains Exempt before implementing the changes. Request for Amendment forms are available online at http://www.irb.wsu.edu/forms.asp.

In accordance with federal regulations, this Certification of Exemption and a copy of the study protocol identified by this certification must be kept by the principal investigator for THREE years following completion of the project.

It is important to note that certification of exemption is not approval by the IRB. The study materials should not include the statement that the WSU IRB has reviewed and approved the study for human subject participation.

Washington State University is covered under Human Subjects Assurance Number FWA00002946 which is on file with the Office for Human Research Protections.

If you have questions, please contact the Institutional Review Board at (509) 335-3668. Any revised materials can be mailed to the Office of Research Assurances (Campus Zip

3005), faxed to (509) 335-6410, or in some cases by electronic mail, to
irb@mail.wsu.edu.

Review Type: New Protocol
Review Category: Exempt
Date Received: 1/18/2008
Exemption Category: 45 CFR 46.101 (b)(2)
OGRD No.: N/A
Funding Agency: N/A

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APPENDIX B

APPROVAL FOR AMENDMENT TO RESEARCH PROTOCOL

MEMORANDUM

TO: EMMETT FISKE and Audrey Willard

FROM: Patrick Conner (for) Kris Miller, Chair, WSU Institutional Review Board (3005)

DATE: 6/23/2008

SUBJECT: Review of Protocol Amendment,IRB Number #10219-002

Your proposal to amend the protocol titled "Community Educational Outreach Efforts in Gray Wolf Population Management Controversy", IRB Number 10219-002 was reviewed for the protection of the subjects participating in the study. Based on the information received from you, the IRB has approved your amendment request on 6/23/2008.

This amendment includes: Addition of phone interviews.

IRB approval indicates that the amendments described to the previously approved study protocol do not invalidate the exempt status of the study. This approval does not relieve the investigator from the responsibility of providing continuing attention to ethical considerations involved in the utilization of subjects participating in the study.

If any more changes are made to the study protocol you must notify the IRB and receive approval before implementation.

If you have questions, please contact the Institutional Review Board at (509) 335-3668. Any revised materials can be mailed to Office of Research Assurances (Campus Zip 3005), faxed to (509) 335-6410, or in some cases by electronic mail, to irb@wsu.edu.

Review Type: Exempt
Review Category: Exempt
Date Received: 6/6/2008
OGRD No.: N/A
Agency: N/A

Thank You,

Institutional Review Board
Patrick Conner
Office of Research Assurances

PO Box 643005
Pullman, WA 99164-3005
Phone:(509) 335-7195
Fax:(509) 335-6410
patrick_conner@wsu.edu

APPENDIX C

VERBAL CONSENT FOR THESIS RESEARCH

Hello, my name is Audrey Willard, and I am conducting research for my thesis at Washington State University. May I ask you some questions about the outreach efforts you participate in? Our interview should take anywhere from thirty minutes to an hour, depending upon how much you would like to talk.

Your participation is completely voluntary. You are free to answer – or not answer – any of the questions. You can even stop the interview at any point. Just let me know.

Whatever you tell me will be kept strictly confidential, and I will not record your name.

With your permission, I would like to record our conversation. The reason I want to make an audiotape of what we say is that I want to get an accurate account. If you allow me to record our conversation, I will transcribe the interview and erase the recording.

Ultimately, I want to write a paper about the outreach efforts in the wolf management controversy, but there will be no way for anyone who reads my paper to identify you.

If you have any questions or concerns about this project, you can contact my professor (Emmett Fiske) at the WSU Department of Community and Rural Sociology – 509-335-6660 or email him at fiske@wsu.edu

Are there any questions about my study that I can answer for you at this time?
Are you willing to participate in my study by answering my questions?

Is it okay with you if I record our conversation? You can tell me at any time to turn off the recorder.

APPENDIX D

INTERVIEW QUESTIONS FOR CONSERVATION, DELISTING, EDUCATION, AND AGENCY GROUPS

How long have you been involved with ___?

How did you become interested in this type of work?

What do see as your role within the debate about wolf management in the west?

What are your goals for wolf education?

How do you achieve those goals?

Why do you use those methods?

What methods seem to be the most effective?

How do you gauge the effectiveness of your methods?

How do you integrate scientific knowledge and value-based information?

How do you perceive the media's coverage of wolf-related issues?

How do you find common ground between extreme views?

What do you think needs to be improved within outreach about wolves?

What are some of the challenges you have faced with wolf education and outreach?

How did (can) you overcome those challenges?

APPENDIX E

INTERVIEW QUESTIONS FOR MEDIA GROUPS

How did you become interested in journalism?

How did you become involved with ____?

How did you get involved with writing articles about wolves?

What do you think the media's role is in the debate about wolves?

What is your goal when writing the articles about wolves?

How do you achieve that goal?

How do you decide who to interview for the articles?

Do you feel like you represent all sides of the debate fairly?
    Do you think other reporters do?

How do you respond to someone suggesting you do not represent all sides fairly?

What do you think when I say the different perspectives of the debate have said the "other side" is getting the majority of the media's attention?

What is the biggest challenge in writing articles about wolves?