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# Comparing the Environmental Attitudes and Behaviors of Native Americans and non-Native Americans

Franklin Sage

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COMPARING THE ENVIRONMENTAL ATTITUDES AND BEHAVIORS OF  
NATIVE AMERICANS AND NON-NATIVE AMERICANS  
by

Franklin Sage  
Bachelor of Arts, University of North Dakota, 2008

A Thesis

Submitted to the Graduate Faculty

of the

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In partial fulfillment of the requirement

for the degree of

Master of Arts

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This thesis, submitted by Franklin Sage in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done, and is hereby approved.

Dr. Daphne Pedersen, Chairperson

Dr. Justin A. Berg

Dr. Krista L. Minnotte

This thesis is being submitted by the appointed advisory committee as having met all of the requirements of the Graduate School at the University of North Dakota and is hereby approved.

Dr. Wayne E. Swisher  
Dean of the Graduate School

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Title           Comparing the Environmental Attitudes and Behaviors of Native  
                  Americans and Non-Native Americans

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Franklin Sage  
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## ABSTRACT

Are Native Americans different from non-Native Americans when it comes to environmental attitudes and behaviors? Historically and traditionally, Native American preservation of the environment has been interwoven into cultural practice, which led to a special relationship between the environment and Native people. This thesis presents results from a comparative, quantitative study that focuses on Native Americans' environmental attitudes and behaviors using data from the 1993, 1994, 2000, and 2010 waves of the General Social Survey. The study is framed using multicultural theory, which values the unique standpoint and perspectives of traditionally marginalized groups. This thesis focuses on the standpoints of Native American groups, making use of narratives from Native American scholars and laypeople from various tribes. The results indicated that Native Americans are generally no different than the rest of American society when it comes to the environmental attitudes and behaviors tested in this thesis.

## CHAPTER I

### INTRODUCTION

This thesis will use data from the General Social Survey to address the question: are Native Americans different than non-Native Americans when it comes to environmental attitudes and behaviors? In this chapter the environmental behaviors of Americans as a whole will be reviewed. A brief history of Native Americans and environmentalism will then be presented, and the fit of multicultural theory to this topic will be discussed. The chapter will conclude with a summary and overview of this thesis.

#### Background

The 21st century is a time of serious global environmental issues. Issues such as global warming, deforestation, and air pollution affect Americans and those from other nations. Yet, not all nations respond in kind to environmental issues. Further, groups within individual countries also respond differently to environmental issues, if they respond at all. What sort of environmental behaviors do Americans as a whole practice? The Environmental Protection Agency (EPA) reported that in 2010 Americans produced 250 million tons of trash (municipal solid waste) and recycled close to 85 million tons of materials including packaging, food scraps, grass clippings, sofas, computers, tires and refrigerators (EPA 2010). The EPA further reported that Americans recycle 72 percent of newspapers, 33 percent of glass containers, and 12 percent of plastic containers and packing. The most recycled plastic was plastic bottles (EPA 2010). The EPA highlighted that American production of municipal solid waste is rapidly outgrowing



landfills. As a whole Americans produce 4.3 pounds of waste per person per day (EPA 2010), and environmental concern does not appear to be keeping pace with waste generation and environmental degradation.

Where have Native American tribes fit into the picture? Historically, Native American tribes have experienced damaging acts from the United States (U.S.) regarding land and natural resources (Craig 2011). The U.S. recognized the atrocity of the past and has improved the protection of Native American resources, including a call on all states to recognize the Declaration of the Rights of Indigenous People to their land, territories, and natural resources (Craig 2011). It is under this declaration that the EPA implemented the 1984 Indian Policy that states, “In carrying out our responsibilities on Indian reservations, the fundamental objective of the Environmental Protection Agency is to protect human health and the environment” (Ruckelshaus 1984:1).

Historically and traditionally, Native Americans’ preservation of the environment has been interwoven into cultural practice (Selin and Kalland 2003), which meant that there was a special relationship between Native people and the environment (Selin and Kalland 2003). Native Americans perceive earth as existing as a human being and have a mutual respect for nature that extends into religious beliefs and ceremonial rituals (Selin and Kalland 2003). To the extent that Native people have carried this traditional cultural practice forward, this thesis expects Native Americans to have stronger environmental attitudes and behaviors than non-Native Americans. This argument is supported by multicultural theory, which values the unique standpoint and perspectives of traditionally marginalized groups (Ritzer and Goodman 2004; Rogers 1996). Multicultural theory rejects mainstream theories that support those in power and empowers those who lack

power (Ritzer and Goodman 2004; Rogers 1996). To date, Native American cultural beliefs and behaviors have been ignored and excluded by the mainstream theories of sociology.

To help rectify this problem, this thesis, informed by multicultural theory, will focus on the standpoint of Native American groups, making use of narratives from Native American scholars and laypeople from various tribes. These narratives will be used to create hypotheses about Native Americans' environmental attitudes and behaviors. Multicultural theory relies heavily on personal narratives as a source of data to represent the standpoints of marginalized groups (Ritzer and Goodman 2004; Rogers 1996). In doing so, it is recognized that these narratives are not linear, rather, they are understood within the historical, social, and cultural contexts in which they develop (Ritzer and Goodman 2004; Rogers 1997). Multicultural theory works on behalf of people who seek structural and cultural change, challenging existing principles and practices and encouraging diversity (Ritzer and Goodman 2004; Rogers 1997). Thus, the theory acknowledges and encourages difference. It is for this reason that multicultural theory is a good fit for the current study, which examines differences in environmental attitudes and behaviors on the basis of longstanding cultural beliefs.

### Current Study

This thesis is an exploratory work that seeks to determine whether Native Americans are different from mainstream Americans when it comes to environmental issues and practices. Currently, research on environmental attitudes and behaviors has been primarily focused on non-Native American society as a whole. This thesis will contribute to the larger body of literature by considering the unique standpoint of Native

Americans. The standpoint narrative serves as a platform for communicating the distinct voices of Native American tribes with regard to environmental attitudes and behaviors. This thesis aims to initiate a closing of the gap in the body of sociological literature from which Native Americans have been largely absent. It will be argued that Native American tribes have been practicing environmental conservation since prior to European contact. This thesis will describe Native Americans' communal cultural practices, including religious beliefs, ceremonies, and creation stories, that may influence current environmentalism. In addressing this question this thesis will lay the foundation for future research on Native American environmental attitudes and behaviors.

#### Summary and Overview of Thesis

In this chapter, a general overview of Americans' environmental behaviors using the 2010 EPA report was described. It was noted that Native Americans' preservation of the environment was in practice long before the EPA Indian Policy was implemented. A case for the application of multicultural theory to this thesis topic was presented, and a brief review of the current study was introduced. Chapter Two will cover the literature review, including background on Americans and the environment, current environmental attitudes and behaviors, and multicultural theory. A special emphasis will be given to the sacred relationship between Native people and the environment. Chapter Three will describe the methodology, including the sample and variables, that will be used to address the research question. Four environmental attitudes and behaviors will be included in the analysis: connection to the environment, concern about the environment, helping the environment, and recycling behavior. In Chapter Four results from the

analysis will be described in detail, and Chapter Five will feature a discussion about the findings and will offer a conclusion. Limitations of the study will also be presented.

## CHAPTER II

### LITERATURE REVIEW

The research question for this thesis is: are Native Americans different from non-Native Americans when it comes to environmental attitudes and behaviors? Americans' environmental attitudes and behaviors change with time and emerging technology. In the introduction, it was noted that the EPA (2010) reported Americans produce far more waste than other industrialized countries and developing countries. This chapter will demonstrate that consumption and wasteful behavior originated with the influx of immigrants to America. In doing so, historical and empirical data will be reviewed including works relevant to the variables studied in this thesis. Then, the thesis will review multicultural theory and its fit with the thesis topic. Finally, the research question guiding this thesis will be examined. With a special focus on narratives, it will be argued that Native American traditions and culture are intertwined with the environment and as such, they have a special relationship with nature (Cajete 2001; Hubson 1979; Selin and Kalland 2003; Tsosie 2000). These narratives will be used to guide the formation of four hypotheses.

#### Background

##### *Americans and the Environment*

People's relationships with the environment have to be understood in the context of historical attitudes and behaviors. In general, American society's relationship with

nature has been dominated by profit. Since their arrival, the perception of Europeans regarding the new land was that it was abundant with natural resources to commodify for profit (Penna 1999). Magoc (2006:19) stated, "...land and all that stood upon it was reduced to commodities for sale." These perceptions resulted in practices, such as deforestation, to make way for farming, to provide lumber needed to build homes, and to provide fire wood for heat and cooking. The influx of immigrants meant more space needed to be cleared and occupied, which led to elimination of nature, species, and humans that were considered to be in the way. Thus, the activity of European immigrants shifted elements of earth's surface into the commodification of natural resources, contributing to rapid depletion. For example, deforestation provided abundant lumber for housing, military forts, and exports to Europe (Penna 1999). At the same time, the process of deforestation also contributed to soil erosion and plant extinction. Moreover, animals that occupied those trees and forest habitats had to relocate to survive. During the time frame of the European colonization of North America, knowledge about ecosystems or preservation was rare.

The reconstruction of nature with deforestation for profit transformed people's perceptions of nature. Non-Native Americans' connection with the environment emerged as two separate spaces, civilization and wilderness, where nature is considered to be a place of wilderness (Cronon 1995). As the population increased and people starting migrating into urban areas, connections with nature further decreased. Wilderness became associated with recreation, wild life, national parks (a special location to experience the nature world), and the non-human world. Cronon (1995) used the following words to describe wilderness: deserted, savage, desolate, barren, and waste.

Yet people tend to forget that the idea that wilderness is a human creation that dates back to the frontier (Cronon 1995). America originated on the east coast and all the land towards the west was unoccupied territory or “wild country.” People were fearful of this unknown territory that only animals and “uncivilized” people occupied. Today non-Native Americans still have a clear distinction between humans, animals, and places. Humans (non-Native Americans) belong in a “civilized” society and occupy a designated geographic location of place and space. It is this occupation that created a conscious and physical separation between humans and nature (Cronon 1995).

When the separation between humans and nature was created, an era of consumption emerged without consideration for environmental issues. Clark expressed that particular human behaviors have contributed to environmental deterioration (as cited in Ausubel, Clark, Kates, and Turner 1990). Ehrlich and Holdren argued that as the country consumes resources to maintain its rather excessive standard of living, the increase in consumption of those goods also increases the depletion of the environment (as cited in Ausubel et al. 1990). The consumption of material goods has become the norm in America, but engaging in environmentally friendly practices has not (Spiegelman and Sheehan 2005).

As a small step, recycling used materials and using them for new products can help decrease the overflow in landfills and slow down the rapid rate of environmental depletion (Strong 1997). Recycling has always been part of human history, especially when resources or materials were scarce and people could not afford new products. In this case, they simply reused items, a common practice among the lower class (Strong 1997). In America an increase in the recycling of scrap metals and paper products

became a necessity to support W.W. II. When the war ended, so did the effort of recycling. Postwar prosperity ushered in a new era of “use it once and throw it away” disposable products like razors, cameras, and plastics (Strong 1997). This led to the overflow of landfills, improper disposal of waste, and growing concerns about environmental impacts on public health (Granzin and Olsen 1991).

### Current Attitudes and Behaviors

Different variables have been used by social scientists to examine attitudes and behaviors toward environmental issues. One that is commonly studied is recycling. For example, Vining and Ebreo (1990) described three factors that distinguish recyclers and nonrecyclers: knowledge, rationale, and demographic characteristics.

The first factor that distinguishes recyclers from nonrecyclers is what individuals know about recycling and how that knowledge was gained (Vining and Ebreo 1990). One of the challenging elements of communication is sending out information to reach a mass audience. What kind of educational source will best predict recycling behavior? Arbuthnot and colleagues (1977) reviewed various studies that utilized telephone surveys, letters asking for compliance, and verbal appeals to recycle. They noted that any one source used alone was not as effective as the combination of all three resources. The provision of convenient recycling containers has also been found to encourage recycling behavior (Luyben and Bailey 1979; Reid, Luyben, Rawers, and Bailey 1976).

The second factor that distinguishes recyclers and nonrecyclers is the various reasons given for recycling or not recycling (Vining and Ebreo 1990). There is no single reason why people recycle. Rather, the varied reasons have been found to include monetary rewards, environmental concerns, social pressure, and altruism (Vining and



Ebreo 1990). Monetary rewards are the most popular motivation among recyclers. Although Luyben and Bailey (1979) discovered that monetary rewards combined with providing information about recycling was more effective than just providing rewards and having convenient containers.

The third factor that distinguishes recyclers from nonrecyclers is demographic characteristics (Vining and Ebreo 1990). Studies have suggested that age, educational level, ethnicity, and socio-economic factors influence recycling behavior and environmental concerns (Bamberg 2003; Vining and Ebreo 1990). In general, studies have indicated that the more educated and the higher income bracket one belongs to, the more likely one is to practice environmentally friendly behavior (Vining and Ebreo 1990). Berger (1997) argued that people in affluent neighborhoods may be more likely to recycle because they tend to have easier access to recycling. However, the literature has shown that results may differ when researchers use single demographic indicators, such as income, or multiple items to measure socio-economic status. Iyer and Kashyap (2007) also suggested that single demographic indicators like income and education have limited utility. Coleman and Schaninger stated, “that multi-item measure indicators like social class have greater predictive power than single item measures like income” (as quoted in Iyer and Kashyap 2007:34).

Recently, Iyer and Kashyap (2007) used a more comprehensive measure of social class that included individuals’ income, occupation, and education. Their study showed a significant relationship between social class and recycling attitudes and behaviors. The study suggested that the lower class favored environmental and recycling attitudes more

than upper and middle class subjects, and that the middle class favored more proactive environmental and recycling attitudes than the upper class.

From the late 1970's, scholars have explored the linkages between people's concern for protecting the environment and racial identity (Whittaker et al. 2005). One common theme of such studies is there is a "concern gap" between white and African American survey respondents, with whites expressing greater concern about protecting the environment than African-Americans (Hershey and Hill 1977-78). Whittaker, Segura, and Bowler (2005) mentioned that many studies have shown little to no difference between the two groups, although the majority of studies utilized a single trend variable. Newell and Green (1997) examined concern for the environment and racial identity while controlling for income and education. The study showed that at low levels of education and income there was a significant difference between whites and African-Americans, however, as income and education increased for both groups the concern gap disappeared (Newell and Green 1997).

Similarly, in a review of the literature, Van Liere and Dunlap (1980) found previous studies had established an association between income and environmental concern. When they examined this literature more closely they found that most studies treated environmental concern as a general term encompassing several specific environmental issues. They suggested that studies break down environmental concern into different types of environmental issues instead of using one large umbrella concept. Mohai and Bryant (1998) used Van Liere and Dunlap's suggestion and found differences between whites and African Americans pertaining to specific environmental concerns. In their study, African Americans were more concerned with pollution and other

neighborhood environmental issues, whereas whites were more concerned with global environmental issues. The studies above show the importance of race as a predictor of environmental attitudes.

Schultz (2000) argued that environmental concerns are also associated with people's perception of themselves as interconnected with nature. As such, Schultz (2000) noted that people can have three views about nature and human life: egoistic (value of the individual above other people and other living things), social-altruistic (personal judgment about environmental issues results from cost or benefit to others), and biospheric (value for all living things). Thus, environmental behavior is thought to be motivated by these various views about nature.

Schultz's (2000) notion of self as linked to perceptions of independence or interdependence with other people and other living things provides an additional argument that environmental concerns are directly correlated with feelings of interconnectedness (Bragg 1996; Weigert 1997). The interconnectedness of people with all living things has been referred to as being "in touch with," "connected with," or "at one with" nature, which is supported by narrative literatures (Hertsgaard 1999; Nabhan and Trimble 1994). For example, many cultures use stories about an individual's relationship with the natural world as learning devices (Elder and Wong 1994). However, not much is known in academic literature about Native Americans' environmental attitudes and behaviors. The next section will review multicultural theory, which values personal narratives and the collective cultural beliefs of minority groups. It is argued that these are instrumental in shaping environmental attitudes and behaviors.

## Multicultural Theory

The theoretical approach used in this thesis is multicultural theory, which is an emerging theory that embraces a space and offers a voice for many disempowered groups. Multicultural theory emerged out of feminist theory (Ritzer and Goodman 2004). Up until 1970, feminist theory was dominated by predominately white, middle-class females. Women of color criticized feminist theory by pointing out that their voices were not being heard (Ritzer and Goodman 2004). Later, Michel Foucault (1980) paved the way for Queer Theory by arguing that homosexuality should be given just as much attention as heterosexual subjects and identities in general sexuality studies. This created a space for other diverse populations like African Americans, Appalachians, and Native Americans to be included in academic writings and empirical works (Ritzer and Goodman 2004). Multicultural theory argues that there are special ways of thinking, feeling, acting, and writing that vary on the basis of diversity and that these special ways should be valued as unique standpoints based on people's diverse multicultural experiences. This thesis will argue that Native Americans have a unique perspective about the environment that may shape their environmental actions.

Multicultural theory fits the current thesis topic because the objective is to identify general patterns of environmental attitudes and behaviors among Native Americans and non-Native Americans and to see whether these attitudes and behaviors differ. This thesis argues that to the extent that Native Americans have carried their traditional practices and culture forward, we might expect Native Americans to have stronger environmental attitudes and behaviors than non-Native Americans. This argument is supported by multicultural theory (Ritzer and Goodman 2004), which values

the unique standpoint and perspectives of traditionally marginalized groups. This thesis will focus on the standpoints of Native American groups, making use of narratives from Native American scholars and laypeople from various tribes. This thesis will describe Native American cultural beliefs about a sacred attachment to nature and environmental behaviors that have been practiced according to tribal tradition.

To understand standpoints, multicultural theory relies heavily on distinct personal narratives. In doing so, it is recognized that these narratives (fictional, confessional, and standpoint) are far more open and diverse, and must be understood within the historical, social, and cultural contexts in which they develop. Because multicultural theory is still emerging, there is limited work linking it to the Native American population. Some authors have implicitly, though not explicitly, made use of multicultural theory to address Native American culture and diversity. For example, Non-Native American scholars like Smith-Rosenberg (1987) have given voice to Native Americans, as evidenced in her work *Captured Subject/Savage Others: Violently Engendering the New American*. Native American scholar, Buffalohead (1992), wrote about cultural sovereignty activities and how policies have empowered cultural rights and protected cultural resources. Allen (1992) wrote about the tribal context of lesbianism. Smith-Rosenberg, Buffalohead and Allen have all contributed to these multidimensional voices that created a space for a Native American standpoint (Rogers 1996). This thesis will use the narratives of Native Americans to propose study hypotheses.

Rogers (1996) argued that through the inclusion of various standpoints, multicultural theory allows for the transformation of knowledge. A multicentric perspective is a necessity in achieving the transformation of knowledge, which creates a

theoretical space for cultures and experiences of diverse groups (Rogers 1996). Thus, multicultural theory does not have one central viewpoint like the majority of social theories. Instead, it has multiple perspectives that contribute to the democratization of knowledge (Rogers 1996). According to Rogers (1996:15) the central aim of multicultural theory is the “demystification- of power and respectability, of normality and “the natural,” of the party line and the official stance.” This thesis includes traditional knowledge from Native American scholars who have inherited their cultural experiences and intertwine this traditional knowledge into academic discourse. The key assumptions of multicultural theory provide a stage for the diversity of all cultural groups to be valued, and also set the stage for this thesis that focuses on Native Americans’ historical connections to the environment and their modern-day attitudes and behaviors. This thesis will next review Native American environmental concerns and traditional knowledge that were in practice long before European contact.

In America, we live in a society with many different subcultures and minority groups, including Native Americans. Today, there are 564 federally recognized tribes in America (Musaus 2010). Prior to European encroachment, Native Americans lived in a society of enculturation. This meant that young Native Americans were socialized into the norms, values, languages, and social behaviors that were relevant to their tribes’ cultural practices (Bennett 2011). Enculturation included learning communal cultural practices about the land and natural environment. Native American narratives will be used in this research to create hypotheses regarding environmental attitudes and behaviors. In addressing these hypotheses this research seeks to reveal whether Native

Americans' attitudes and behaviors today differ from those of non-Native Americans when it comes to the environment.

### Native Americans and the Environment

The relationship between Native Americans and the land is complex and unique. In this thesis, the focus is not on one specific tribe. Rather, a variety of tribes are considered: Acoma Pueblo, Laguna Pueblo, Navajo and Yaqui from the Southwest; Northern plains tribes including Blackfeet, Crow, Comanche, Eastern Shoshone, Northern Araphoe, and Northern Cheyenne; California tribes such as Karuk, Modoc, and Pit River; and the Alaskan tribe, Koyukon. These tribes are included to show that although different in many ways, Native Americans have similar connections with nature. This discussion begins with the belief that the location Native Americans occupy for residence evolves into symbolic meaning and attachment (Noddings 2005). For example, many Navajo people live on a reservation that occupies Arizona, New Mexico, and Utah. Within the Navajo reservation, there are four sacred mountains. These mountains have symbolic meanings that are expressed in Navajo creation stories and ceremonial songs. Tribes like Blackfeet, Crow, Comanche, Eastern Shoshone, Northern Araphoe, and Northern Cheyenne consider the Valley of the Shields (Chiefs), in south central Montana, a sacred religious ritual site. Medicine Lake Highlands, in northeastern California, has a symbolic attachment regarding healing energy for the California Indian tribes including Karuk, Pit River, Modoc, Shasta, and Winto (Zarsky, Dzelzitis and McLeod 2006). The three geographic sites mentioned above symbolize some form of religious attachment to the land through healing (Medicine Lake Highlands and Valley of the Chiefs) and boundaries for the occupying tribes (four sacred mountains).

The territorial space or *this* place symbolizes all of Native American social environment and rootedness to a sacred place. Jimmy Arterberry (Comanche) expressed “*this* isn’t just some place on a hill. *This* is a living spiritual center” (Zarsky et al. 2006:27), referring to the Valley of the Chief, Montana. Tribes have utilized the Valley of the Chief as a sacred ritual ground for vision quests, prayers and traditional burials, and medicinal plants flourish in the valley (Zarsky et al. 2006). Simon Ortiz (Acoma Pueblo) alluded to “that place Indian people talk about” (Cajete 2001:621) when discussing the Native American analogy of a sacred place symbolizing a natural force.

Gregory Cajete (2001:623) noted, “the relationship of Indian people to geography embodies a sacred orientation to place that reflects the very essence of what may be called spiritual ecology.” The relationship with land encompasses not only the physical elements of geography (e.g., river, forest, streams, plants and animals), but also a conscious connection to *this* place. The conscious connection makes the land a spiritual place, a space for Native American cultural existence (Cajete 2001). Human beings have always oriented themselves to geographic landscapes that they attach to in some manner. For example, I always refer to my home being Counselor, New Mexico, which is on the eastern side of the Navajo Reservation. I have been living in Grand Forks, North Dakota, for 14 years; but I don’t consider it to be my home. I don’t have the same roots to Grand Forks that I do to *this* place called Counselor, New Mexico.

*This* place transforms the personal and symbolic meaning into a “homeplace” (Noddings 2005) for Native American tribes to occupy as caretakers or guardians. Native Americans know the homeplace as land and all the physical elements attached to these special environments. In the process of the life cycle, the depth of attachment between



the homeplace and Native Americans is interwoven to exist as one. In the case of the Navajo-Hopi Land Settlement Act of 1974, some Navajos were relocated to a different geographic location within the Navajo reservation (Noddings 2005). They experienced social problems like depression, alcoholism, and suicide as a result of this forced relocation (Noddings 2005). Countless other tribes and tribal members have also endured a plethora of negative impacts resulting from government enforced relocation.

The depth of the relationship between Native Americans and land is rooted in spirituality, language, and identity. Rebecca Tsosie (2000), a Yaqui Indian, echoed that land is the fundamental basis of cultural identity. It is this shared spiritual experience between humans and land that defines clans. Native Americans communicate to the land and the natural world through prayer during ceremonies in communicating with the natural world. The traditional languages of Native Americans are important to the heritage of traditional ceremonies. The languages preserve the ceremonial songs and prayers that are offered to the land (Keyah, Navajo) and the Holy People (Navajo Gods). In the Navajo creation story, humans are made from earth by the Holy People and the wind gave them life. This demonstrates the connection between earth (land), the environment, and people.

The special relationship between the environment and Native people has been referred to as a communal cultural practice (Selin and Kalland 2003). Paula Gunn Allen (Laguna Pueblo) states, “We are the land... that is the fundamental idea embedded in Native American life... the earth is the mind of the people as we are the mind of the earth” (as quoted in Hubson 1979:191). Native Americans have a mutual respect for the land (earth) that is commonly referred to as “Mother Earth.” It is the land that defines the

social milieus and mores for the Native American people. The land takes care of the people by providing them natural resources like water, plants, animals, and space. For example, the earth provided animals (deer, rabbits, buffalo, and elk) for food and clothing and plants to consume to survive. Tribes residing in the coastal areas were given mammals (fish and whales) to eat for nourishment. Water was given to animals and humans to share. Mother Earth provided an eco-system so all living species that occupy her space can co-exist together. On the basis of these beliefs, the first three hypotheses of this study are:

Hypothesis One: The odds are greater that Native Americans express a sacred connection to the environment than non-Native Americans.

Hypothesis Two: Native Americans express greater concern about the environment than non-Native Americans.

Hypothesis Three: Native Americans are more likely to help the environment than non-Native Americans.

The spiritual ecology of Navajo people includes the traditional and current use of earth for a shelter called a “hogan.” In the Navajo creation story, Talking God instructed the Navajo people on how to build a hogan when they (the Navajo) emerged into the Fourth World. The hogan is a shelter built into a circular shape made out of trees and clay. It is a symbolic space for ceremonies, provides unity between man and woman, a connection with the universe, and protection for the *Dine’* (the people). For traditional Navajo people, building a hogan in a special designated location exemplifies *this* place and home place. A gift given to Dine’ by the Holy People in a Blessing Way Song (sacred song ceremony) plants this relationship between humans and earth. The hogan

represents enculturation of *this* place. Building a hogan is a communal event practiced within families and among clan relatives. Adults socialize the youth about the significance of a hogan as it is being built to help them understand the value of that location and the social behavior that takes place within and around the location. A fundamental use of a hogan is that it occupies all ceremonial songs (examples: Blessing Way, Night Chant, and healing songs).

Native American traditional songs and stories are related to their spiritual ecology. George A. Dorsey tells the emergence story of the Cheyenne in which Great Medicine created earth, water, sun, moon, and stars... then he created three different kinds of human beings (hairy men, white men, and red people) (Erdoes and Ortiz 1984). Human beings immigrated throughout the land and adapted to the environment. Great Medicine blessed the people with gifts to survive, such as animals to eat and for clothing and corn to plant (Erdoes and Ortiz 1984).

Native Americans also share a common belief that the earth is a living being. The Alaskan Koyukon Tribe view earth as alive and powerful; therefore, it should be treated with respect (Selin and Kalland 2003). Traditional Koyukon people have a high regard for the natural and supernatural sphere that encompasses the environment. Knowledge about these powers is essential and if not respected, the survival of the Koyukon will be at risk (Selin and Kalland 2003). The notion of respect toward animals from the Koyukon is just as sacred and important as respect toward earth. A Koyukon hunter has to ask permission before taking the life of an animal and then uses every bit of its body. It is believed that any waste or mistreatment of the animal will result in the loss of the species and the Koyukons' survival will be jeopardized (Selin and Kalland 2003).

Native peoples' consciousness understands this spiritual ecology and their own tribal affiliation determines tribal and individual identity.

A traditional Navajo hogan is built by recycling the earth and trees. The Cheyenne creation story is about the Great Medicine creating and providing for all living things to interact as one. That Koyukon hunters must ask permission before taking a life of an animal and not waste any part of that animal demonstrates that recycling was in practice long before European contact. On the bases of these narratives support for Hypothesis Four is provided.

Hypothesis Four: Native Americans recycle more than non-Native Americans.

#### Summary

In this chapter background information related to Americans and their relationship to the environment was described, current studies of environmental attitudes and behaviors were covered, the key assumptions of multicultural theory were presented, and personal narratives of Native Americans as they relate to environment were used to propose four study hypotheses. On the basis of the cited literature and with multicultural theory as a framework, the hypotheses for this study will be tested using secondary data from the General Social Survey.

In the next chapter, the focus will be on the study's methodology, with a discussion that includes: design, sample, and variable operationalization.

## CHAPTER III

### METHOD

The purpose of this study is to explore the research question: are Native Americans different from non-Native Americans when it comes to environmental attitudes and behaviors? This chapter will describe the methodology the study used to obtain information about Native Americans' environmental attitudes and behaviors and to see if they are any different from those held by the rest of society. The chapter will include information about the data and sample, conceptualization and operationalization of study variables, and analysis strategy.

#### Data and Sample

The data for this study come from the 1993, 1994, 2000, and 2010 waves of the General Social Survey (GSS). GSS data are collected using a probability sampling technique in metropolitan and non-metropolitan areas. Face-to-face interviews were conducted to ensure that respondents answered relevant questions. Interviews took roughly 90 minutes to complete. Telephone interviews were utilized only when respondents had difficulty arranging in-person interviews. Computer assisted personal interviews (CAPI) were later implemented in 2002. The response rates for the GSS data used in this study were as follows: 82% in 1993, 78% in 1994, 70% in 2000, and 70% in 2010 (Smith, Marsden, Hout, and Kim 2011).

A compilation of data from 1993, 1994, and 2000 was used in this study to test Hypothesis One, Hypothesis Three, and Hypothesis Four, because these data points were

the only times for which the relevant variables were included in the survey. Further, data from multiple years were needed in order to generate a dataset that included enough Native American cases for statistical examination. In the 1993 GSS survey there were 71 Native American respondents, 1994 had 90 Native American respondents, and 2000 had 109 Native American respondents, for a total of 270 Native American respondents for the compiled years of 1992, 1993, and 2000. The variable *concern about the environment* used to test Hypothesis Two was asked only in 2010 and a total of 77 Native American respondents were surveyed that year. At this stage, cluster sampling was used to create a manageable dataset that both adequately represented respondents from both groups within the population while preserving variability between subjects. For these years all Native American respondents were selected and a roughly similar number of non-Native American respondents were randomly selected. The total number of respondents was 590 for the compiled dataset and 173 for the 2010 dataset. However, because of missing data for some of the variables, analyses that follow include a smaller number of respondents than the full samples described above.

### Measures

The objective of this study is to find the answer to the research question: are Native Americans different from Non-Native Americans when it comes to environmental attitudes and behaviors? The following dependent variables are included in the study: connection to the environment, concern about the environment, helping the environment, and recycling behavior. Each of these variables will be discussed in turn. The independent variable is the ethnicity of the respondent. Demographic variables including

respondents' age, education, income and sex are used as control variables in the multivariate analyses.

### *Dependent Variables*

*Connection to the environment.* To measure connection to the environment, the following question was used: "Please check one box to show which statement is closest to your view." The answers were as follows: 1 = nature is created by God, 2 = nature is sacred in itself, and 3 = nature is important, but not sacred. A recoding was administered on the variable as follows: 0 = nature important but not sacred and 1 = nature sacred or created by God (nature created by God and nature sacred in itself were combined into a single category). This variable was included in the surveys for 1993, 1994, and 2000.

*Concern about the environment.* Knowing a respondent's level of concern about the environment will show whether they are thinking about environmental issues. The question used to measure concern for environment was as follows: "Generally speaking, how concerned are you about environmental issues? Please tell me what you think." The answers were on a Likert Scale ranging from (1) "not at all concerned" to (5) "very concerned." This question was asked only in the 2010 survey.

*Helping the environment.* To measure the variable helping the environment, the following question was asked: "I do what is right for the environment even when it costs more money or takes up more time." The answers were on a Likert Scale ranging from "strongly agree" (1) to "strongly disagree" (5), with a "neither agree nor disagree" category (coded 3). Answers were reverse coded such that higher scores indicate agreement rather than disagreement. This question was asked in years 1993, 1994, and 2000.

*Recycling.* A recycling variable will be used to measure environmental behaviors. The question asked of respondents was as follows: “How often do you make a special effort to sort glass or cans or plastic or newspapers and so on for recycling?” The answers were on a Likert Scale ranging from always to never. These values were recoded so that 1 = never, 2 = sometimes, 3 = often, and 4 = always. This question was asked in years 1993, 1994, and 2000.

#### *Independent Variable*

*Ethnicity.* To measure respondent’s ethnicity, the variable indicator, “country of family origin” was used. The question that was asked was as follows: “From what countries or part of the world did your ancestors come?” Respondents were given 42 countries to choose from and American Indian (it is unknown why American Indian is an option mentioned as a country) was option 30. In this study, two groups were compared: non-Native American and Native American respondents. A recoding was administered on the variable “ethnic” as follows: 0 = non-Native Americans (every other country mentioned in the family of origin) and 1 = Native American/American Indian.

#### *Control Variables*

The following control variables will be used in multivariate analyses: age, education, income, and sex. The *age* of respondents was measured by asking, “What is your date of birth?” Respondents were asked to provide the month, day and year of their birth. The information was then used to calculate the respondents’ ages at the time the questionnaire was administered. The respondent’s *education* was measured in years from 0 to 20, where 0 equaled no years of formal schooling and 20 indicated 8 or more years of college. *Income* was measured ordinally. The answers ranged from (1) below \$1,000



and (2) \$1,000 to \$2,999, at the lower end of the scale, to (12) \$25,000 or more at the upper end of the scale. The respondent's *sex* was measured by identifying their sex as (1) male or (2) female.

### Analytical Strategy

Descriptive statistics, including means and standard deviations, will be presented first for the study variables. Hypothesis One will then be tested using a chi-square test and logistic regression using the compiled data set from 1993, 1994, and 2000.

Hypothesis Two will be tested using a chi-square test and multiple regression using 2010 GSS data. Hypotheses Three and Four will be tested using a chi-square test and multiple regression using the data from 1993, 1994, and 2000.

In the next chapter, results for the research question: are Native Americans different from non-Native Americans when it comes to environmental attitudes and behaviors? will be reviewed. Chapter Four will also discuss whether the hypotheses are supported.

## CHAPTER IV

### RESULTS

The research question for this thesis is: are Native Americans different from non-Native Americans when it comes to environmental attitudes and behaviors? This chapter will first present descriptive statistics for the study variables. Next, results for the four hypotheses that were tested will be reviewed.

#### Descriptive Statistics

Table 1 presents descriptive statistics for the combined data set. For the dependent variable, *connection to the environment*, the mean score for respondents was .64, suggesting that 64% respondents reported the belief that nature is sacred or created by God. The mean for *helping the environment* was 3.41 (SD = .88) on a scale of 1 to 5. Thus, the average for the sample was near the “neither agree nor disagree” response category. For *recycling*, the average was 2.73 (SD = 1.12), which was between “sometimes” and “often.” Forty-six percent of sample was composed of Native Americans. In terms of the control variables, the average *age* of respondents was 42.48 years (SD = 15.81). They had a mean *educational level* of 12.76 years (SD = 2.78) and a mean income of 10.37 (SD = 2.50) on the ordinal scale, indicating that the average was between \$15,000 and \$19,999. Finally, more women (58.9%) than men (41.1%) were in the sample (M = 1.60, SD = .50).

Table 1: Summary Statistics for Study Variables in the Combined Dataset.

	N	M	SD	Range
<u>Dependent Variables</u>				
Connection to the environment	302	.64	.48	0 – 1
Helping the environment	328	3.41	.88	1 – 5
Recycling	324	2.73	1.12	1 – 4
<u>Independent Variable</u>				
Ethnicity	590	.46	.50	0 – 1
<u>Control Variables</u>				
Age	590	42.48	15.81	18 – 89
Education	590	12.76	2.78	0 – 20
Income	590	10.37	2.50	1 – 12
Sex	590	1.60	.50	1 – 2

Table 2 presents descriptive statistics for the 2010 dataset. For the dependent variable, *concern about the environment*, the mean score for respondents was 4.04 (SD = 1.11), indicating that respondents were “concerned.” Forty-five percent of the sample was Native American. In terms of the control variables, the mean score for *age* was 45.80 years (SD = 15.24), the mean for *education* was 13.05 years (SD = 2.62), the mean *income* was 10.70 (SD = 2.50) which was roughly \$15,000 to \$19,999, and more women (60.7%) than men (39.3%) were in the 2010 sample (M = 1.61, SD = .49).

Table 2: Summary Statistics for Study Variables in the 2010 Dataset.

	N	M	SD	Range
<u>Dependent Variable</u>				
Concern about the environment	121	4.04	1.11	1 – 5
<u>Independent Variable</u>				
Ethnicity	173	.45	.50	0 – 1
<u>Control Variables</u>				
Age	173	45.80	15.24	18 – 89
Education	173	13.05	2.62	0 – 20
Income	173	10.70	2.50	1 – 12
Sex	173	1.61	.49	1 – 2

## Hypothesis One

Hypothesis One stated that the odds are greater that Native Americans express a sacred connection to the environment than non-Native Americans. This hypothesis was tested using a chi-square test and logistic regression. Because of missing data, the samples were smaller than those reported in the descriptive tables for these analyses and those that follow for Hypotheses Two, Three, and Four. The results presented in Table 3 suggest that 70% of Native Americans believed nature is sacred or created by God compared to 64.6% of non-Native Americans, and 30% of Native Americans believed nature is important but not sacred compared to 35% of non-Native Americans. The Pearson chi-square value is .82 with 1 degree of freedom, and is not significant ( $p = .36$ ). Thus, Native Americans and non-Native Americans in the sample did not differ in their connection to the environment according to the results of the chi-square test.

Table 3: Crosstabulation of Connection to the Environment by Ethnicity (N = 302).

	Ethnicity		Total
	Non-Native Americans	Native Americans	
Nature important but not sacred	58 35.4%	42 30.4%	100 33.1%
Nature sacred or created by God	106 64.6%	96 69.6%	202 66.9%
Total	164 100.0%	138 100.0%	302 100.0%

Chi square = .82 with 1 degree of freedom,  $p = .36$ .

Next, logistic regression was conducted to test the relationships between the independent variable ethnicity, control variables (age, education, income, and sex) and connection to the environment. Results are presented in Table 4. Table 4 shows the

coefficients for the variables and sex is the only statistically significant variable. The odds ratio of less than one suggests that women were less likely than men to view nature as being sacred or created by God. The explained variance of the model is low: pseudo  $R^2 = .05$ . Overall, then, Hypothesis One was not supported.

Table 4: Logistic Regression Coefficients and Odds Ratios Predicting Log Odds of Connection to the Environment (N = 283).

	B	SE	Odds Ratio
Age	-.003	.008	.997
Education	-.074	.047	.929
Income	-.025	.058	.975
Sex	-.645	.258	.525*
Ethnicity	.154	.276	1.166
Constant	2.286	.945	9.831
-2 log likelihood	350.304		
Chi square	10.880		

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Hypothesis Two

Hypothesis Two stated that Native Americans express greater concern about the environment than non-Native Americans. This hypothesis was tested using a chi-square test and multiple regression using the 2010 data. The crosstabulation results are presented in Table 5. Results suggested that 56 % (n = 30) of Native Americans were very concerned about the environment compared to 34% (n = 23) of non-Native Americans. The Pearson's chi-square is 9.306 with 4 degrees of freedom ( $p = .05$ ). Thus, Hypothesis Two was supported by the chi-square analysis.

Table 5: Crosstabulation of Concern about the Environment by Ethnicity (N = 121).

	Ethnicity		
	Non-Native Americans	Native Americans	Total
Not at all concerned	2 3.0%	2 3.7%	4 3.3%
2.00	7 10.4%	2 3.7%	9 7.4%
3.00	16 23.9%	14 25.9%	30 24.8%
4.00	19 28.4%	6 11.1%	25 20.7%
Very concerned	23 34.3%	30 55.6%	53 43.8%
Total	67 100.0%	54 100.0%	121 100.0%

Chi-square = 9.306 with 4 degrees of freedom,  $p = .05$ .

Next, a multiple regression was conducted to test Hypothesis Two. The equation included the independent variable ethnicity and the control variables (age, education, income, and sex). Findings are presented in Table 6. The findings indicated that the model cannot be inferred to the population ( $p = .79$ ) and none of the variables were significantly associated with the dependent variable. Hypothesis Two was not supported by the multiple regression analysis.

Table 6: Ordinary Least Squares Regression Predicting Concern about the Environment (N = 104).

	B	SE	$\beta$
Age	.001	[.007]	.015
Education	.002	[.042]	.055
Income	.014	[.050]	.028
Sex	-.012	[.226]	-.005
Ethnicity	.352	[.233]	.154
Adjusted R <sup>2</sup>		-.025	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

### Hypothesis Three

Hypothesis Three stated that Native Americans are more likely to help the environment than non-Native Americans. A chi-square test was first used to test this hypothesis. The results presented in Table 7 suggest that 52% of Native Americans agreed or strongly agreed that they do what they can to help environment, whereas 54% of non-Native Americans agreed or strongly agreed. The Pearson’s chi-square is 2.2 with 4 degrees of freedom ( $p = .70$ ). The results showed that Native Americans did not differ significantly from non-Native Americans when it comes to helping the environment.

Hypothesis Three was not supported by the chi-square analysis.

Table 7: Crosstabulation of Helping the Environment by Ethnicity (N = 328).

	Ethnicity		Total
	Non-Native American	Native American	
Strongly Agree	12 7.1%	11 7.0%	23 7.0%
Agree	79 46.55%	71 44.9%	150 45.7%
Neither Agree Nor Disagree	43 25.3%	47 29.75%	90 27.4%
Disagree	36 21.2%	28 17.7%	64 19.5%
Strongly Disagree	0 .0%	1 .6%	1 .3%
Total	170 100.0%	158 100.0%	328 100.0%

Chi square = 2.2 with 4 degrees of freedom,  $p = .70$ .

Next, a multiple regression was conducted to test Hypothesis Three, and the equation included ethnicity and the control variables (age, education, income, and sex). Findings are presented in Table 8. Two independent variables were significantly associated with the dependent variable: age and income. Both age and income were negatively associated with the dependent variable, indicating that those who were older

and had higher incomes were less likely to report helping the environment. Despite these significant relationships, the model cannot be inferred to the population ( $p = .06$ ).

Hypothesis Three was not supported by the multiple regression analysis.

Table 8: Ordinary Least Squares Regression Predicting Helping the Environment (N = 302).

Variables	B	SE	$\beta$
Age	-.008	[.003]	-.148**
Education	.009	[.020]	.028
Income	-.050	[.022]	-.145**
Sex	-.102	[.104]	-.057
Ethnicity	-.082	[.107]	-.046
Adjusted R <sup>2</sup>		.019	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

#### Hypothesis Four

Hypothesis Four stated that Native Americans recycle more than non-Native Americans. A chi-square test and multiple regression were used to test the relationship between ethnicity and recycling. The crosstabulation results presented in Table 9 show 29% of Native Americans always recycled compared to 43% of non-Native Americans, 23% of Native Americans often recycled compared to 19% of non-Native Americans, 24% of Native Americans sometimes recycled compared to 23% of non-Native Americans, and 25% of Native Americans never recycled compared to 14% of non-Native Americans. The Pearson's chi-square is 9.4 with 3 degrees of freedom, and a significant p value was obtained ( $p = .02$ ). The chi-square results suggested that Native Americans in this sample did differ significantly from non-Native Americans, but Hypothesis Four is not supported because Native Americans recycled less frequently than non-Native Americans.



Table 9: Crosstabulation of Recycling by Ethnicity (N = 324).

	Ethnicity		Total
	Non-Native American	Native American	
Never	25 14.3%	37 24.7%	62 19.1%
Sometimes	41 23.4%	36 24.0%	77 23.7%
Often	34 19.4%	34 22.7%	68 20.9%
Always	75 42.9%	43 28.7%	118 36.3%
Total	175 100.0%	150 100.1 %	325 100.0%

Chi square = 9.4 with 3 degrees of freedom,  $p = .02$ .

A multiple regression (see Table 10) was conducted to analyze the relationships between recycling, ethnicity, and the control variables (age, education, income, and sex). The model was significant and can be inferred to the population ( $f(7.629)$ ,  $p < .001$ ). The adjusted  $R^2$  indicates that 10% of the variance in recycling was explained by these variables. The influential independent variables were age ( $\beta = .20$ ,  $p < .001$ ), education ( $\beta = .16$ ,  $p < .01$ ) and income ( $\beta = .19$ ,  $p < .01$ ). These were all positive associations, indicating that those who were older, with more education, and had higher incomes were more likely to recycle. Ethnicity was not significantly associated with recycling in the multiple regression. Thus, support was not found for Hypothesis Four.

Table 10: Ordinary Least Squares Regression Predicting Recycling (N = 298).

Variables	B	SE	$\beta$
Age	.013	[.004]	.201***
Education	.062	[.024]	.155**
Income	.083	[.027]	.188**
Sex	.182	[.128]	.079
Ethnicity	-.181	[.132]	-.079
Adjusted $R^2$		.100	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

## Summary

In summary, Hypothesis One, the odds are greater that Native Americans express a sacred connection to the environment than non-Native Americans, was not supported according to the chi-square test and logistic regression analysis. Partial support was found for Hypothesis Two, Native Americans express greater concern about the environment than non-Native Americans, in the chi-square analysis. However, it was not supported in the multiple regression analysis. Hypotheses Three and Four pertaining to helping the environment and recycling were not supported in either the chi-square tests or multiple regression analyses. Overall, then, none of the multivariate analyses supported the study hypotheses.

In the next chapter, a discussion of the results, implications, limitations, suggestions for future research, and conclusions of the study will be presented.

## CHAPTER V

### DISCUSSION

The objective of this thesis was to reveal the answer to the question: are Native Americans different than non-Native Americans when it comes to environmental attitudes and behaviors? It was argued that historically and traditionally Native Americans' preservation of the environment has been interwoven into cultural practices (Selin and Kalland 2003). This thesis expected that to the extent that Native American people have carried their traditional cultural practices forward, Native Americans would have more supportive environmental attitudes and behaviors than non-Native Americans. This argument is supported by multicultural theory, which values the unique standpoint and perspectives of traditionally marginalized groups (Ritzer and Goodman 2004; Rogers 1996). This thesis focused on the standpoint of Native American groups, making use of narratives from Native American scholars and laypeople from various tribes. This thesis described Native Americans' communal cultural practices, including religious beliefs, ceremonies, and creation stories, that have may influence current environmentalism.

This chapter will include a discussion of the results of the statistical examinations that were used to test the four study hypotheses. This discussion will be followed by study implications, limitations, suggestions for future research, and a concluding statement.

## Discussion of Results

The present study was conducted to assess differences between Native American and non-Native Americans pertaining to environmental attitudes and behaviors. The first hypothesis, the odds are greater that Native Americans express a sacred connection to the environment than non-Native Americans, was not supported. Results showed that although women were less likely than men to believe that nature is sacred or created by God, Native Americans were no different than non-Native Americans in this regard. Literature was reviewed on Native American symbolic meaning, attachment (Noddings 2005) and sacred religious sites (Zarsky, Dzelzitics, and McLeod 2006) as they relate to identification with *this* place. Cajete (2001) argued that spiritual ecology is a conscious connection that makes the land a spiritual place, a special space for Native Americans that is linked to their cultural heritage. Noddings (2005) stated *this* place transforms the personal and symbolic meaning into a homeplace for Native American tribes to occupy as caretakers or guardians. It is possible that Native Americans who participated in the survey did not associate a connection with *this* place to the environment as a whole.

It may also be possible that the survey participants may have identified their homeplace to be their current location of residence, away from the sacred sites of symbolic attachments. Another possibility may be the resulting impact of The Indian Relocation Act of 1954 (Prucha 2000), a policy designed for Native Americans to leave the reservations and to assimilate into the general population. Native Americans left their traditional homes on the reservation and adopted a new territorial space in cities or towns away from *this* place, which once defined their social environment and rootedness. Native American tribes have experienced damaging acts from the United States regarding

land and natural resources (Craig 2011). In the process, Native Americans may have lost a sacred connection to the environment that was once held or this connection may now be dislocated. Thus, one consequence of the process of relocation and assimilation may be the lack of difference between Native and non-Native Americans in this regard.

Chi-square results supported Hypothesis Two that stated Native Americans express greater concern about the environment than non-Native Americans. Tsosie (2000) argued that land is the fundamental basis of cultural identity for Native Americans and they have a deep respect for the land (earth). However, the study only partially supported Native Americans' special concern about the environment, as the multiple regression results did not support Hypothesis Two. When other factors were controlled for ethnicity was not associated with concern about the environment. Again, a strong possibility may be the resulting impacts of The Indian Relocation Act of 1954. It resulted in the relocation of Native Americans into urban communities and in the process may have caused them to lose a sacred connection to *this* place as they assimilated into the general population. The relocation did not only remove Native Americans from their communities and land, it also removed their fundamental cultural identity. The Indian Relocation Act may have dismantled the relationship between Native Americans and land but it did appear that concern for the environment may remain at least in terms of the bivariate analysis.

It is another possibility that Native Americans who took the survey could have similar education and income levels to the rest of the populations, so a "concern gap" did not exist for this sample of respondents. As noted by previous authors, as income and education increase, ethnicity appears to no longer be a significant predictor of

environmental concern. In a study conducted by Newell and Green (1997) concern for the environment was examined in light of racial identity, income, and education. As income and education increased for racial groups, the concern gap disappeared. It is also a possibility that the variable that was used in the GSS to address this hypothesis was too general a measure of concern to detect relevant differences. Mohai and Bryant (1998) found that differences in environmental concern do exist between racial groups, with minorities expressing greater concern about specific environment issues, and whites expressing greater concern about more global environmental measures. The mixed findings for Hypothesis Two deserve further attention in future research to determine whether ethnicity truly does matter in shaping environmental attitudes and behaviors.

Hypothesis Three tested whether Native Americans were more likely to help the environment than non-Native Americans. Results showed that Native Americans were no different than non-Native Americans in helping the environment. It is possible that Native Americans who took the survey interpreted the question, “I do what is right for the environment even when it costs more money or takes up more time,” as being related more to personal finances than environmental concern. It is also a possibility that “environment” was perceived as an umbrella concept (Van Liere and Dunlap 1980). Mohai and Bryant’s (1980) approach of using specific environmental concerns like pollution and other neighborhood environmental issues could be used in this case to refer to specific physical locations tied to spiritual practice. If this were to be done, perhaps a different outcome would be found among Native American respondents.

It is possible that there is no difference between Native Americans and non-Native Americans in terms of helping the environment, and the evidence from the

statistical analyses accurately portray this similarity. In fact, the results of the study regarding Hypothesis Four, Native Americans recycle more than non-Native Americans, indicated that Native Americans were found to recycle less frequently than non-Native Americans. Thus, lack of support was found for both hypotheses that addressed environmental behaviors. Traditionally, Native Americans practiced recycling during hunting games. No part of an animal was wasted or mistreated by hunters (Selin and Kalland 2003). Native Americans who took the survey may have assimilated into the general society and they may no longer participate in traditional hunting practices. Furthermore, recycling cans and bottles does not hold the same symbolic meaning as these traditional practices or non-recycling. It is also possible that Native Americans who took the survey have limited access to recycling or live near recycling bins. Although ethnicity was not a significant variable in the regression model testing Hypothesis Three, age and income were important predictors. Indicating that those who were older and had higher incomes were less likely to report helping the environment.

The lack of evidence in support of the study hypotheses may be suggestive of the diversity that exists both across Native American tribes and within the non-Native population as well. This thesis was a comparative study of Native and non-Native Americans, but did not consider the variation that exists within each group. Admittedly, there is a great deal of diversity across tribes and within the non-Native population as a whole.

### Implications

In general, therefore, it seems that Native Americans do not differ when compared to non-Native Americans in regard to environmental attitudes and behaviors. An

important practical implication is that environmental policy should be made without regard to ethnicity or special cultural considerations. Going forward into the future, special considerations like the Declaration of the Rights of Indigenous People and 1984 Indian Policy may no longer be necessary. Moreover, recycling opportunities should be made available to all citizens of America regardless of ethnicity, class, or location. Increasing accessibility for recycling in rural areas including Native American reservations will decrease the overflow of landfills.

#### Limitations

A limiting factor of this thesis is the inability, given the GSS dataset, to fully represent the diversity that exists both within the U.S. population as a whole, and across Native tribes. It has been noted that there are 564 Federally Recognized Tribes in the U.S. (Musaus 2010). It is unclear which of these tribes were represented in the dataset, and possible that environmental attitudes and behavioral practices may vary across tribes. Ethnic diversity among non-Native American respondents also deserves attention.

A serious limitation of this research is the lack of literature focusing on the Native American population and its relationship to various topics within sociology. This thesis demonstrates that scholars need to include Native American cultural beliefs and behaviors in studies done by sociologists and social scientists. In this thesis, much of the literature on Native Americans and the environment used standpoint narratives from various disciplines outside of sociology. Various tribal scholars and authors have been used to build a case that Native Americans have a special relationship with the environment. A wider understanding of over 500 Native American tribes needs to be addressed in the academic discourse.



In addition, an important limitation lies in the variables that were available in the General Social Survey. This thesis made use of the few relevant questions about the environment that were asked in the survey. The available questions were very general in nature. Furthermore, the use of single item questions may be problematic. Single items may not tap into the various dimensions of the environment that Native Americans are concerned about; nor do they offer much variation in responses. In a study conducted by Sherman, Van Lanen and Sherman (2010), more specific and culturally-relevant questions were asked of respondents. For example, statements such as, “I would be willing to have a large portion of reservation lands dedicated to wildlife restoration, including buffalo,” and “I would be willing to have use of my family’s land restricted for a few years to help restore wildlife and native plants,” were presented to respondents. Questions such as these may be better suited to tap into Native Americans’ feeling about the environment and environmental behaviors. These questions seem better able to get at the core beliefs of Lakota people with regard to environmentalism. This study could also be modified to represent the more comparative approach taken in this thesis, to look at similarities and differences of Native Americans and non-Native Americans such as farmers and ranchers. For example, both groups could be asked to respond to statements such as, “I would be willing to have a portion of the land I farm or ranch dedicated to wildlife restoration,” and “I would be willing to dedicate a portion of the land for a few years to help restore wildlife.”

#### Suggestions for Future Research

This thesis suggests that further research on Native Americans’ environmental attitudes and behaviors should take a more refined perspective that focuses on diversity

of Native American tribes when comparing to the rest of American society. It would also be useful to provide a question in the GSS asking Native Americans to identify their tribal affiliation. As mentioned in the literature review, there are 564 federally recognized tribes in America (Musaus 2010). In general, Native American or American Indian is used as an umbrella term to speak of these 564 tribes. Scholars are encouraged to consider the unique differences in cultural practices among the tribes, as well as their similarities.

Another suggestion for future research is including models or developing a research design that will be more inclusive of Native American cultural beliefs and practices. This may help to better capture the traditional knowledge of Native Americans and their beliefs about the environment. A face-to-face interview may be more appropriate when researching cultural beliefs on the Native American reservations.

In future projects, researchers could examine research questions that are both comparative and more specific than the hypotheses addressed in this thesis. For example, cultural beliefs and practices could be linked to financial opportunities that exploit the environment. By asking respondents to choose between financial gain and environmental protection, researchers may be able to more fully understand the depth of environmental attitudes. For instance, Native and non-Native Americans could be asked questions like, “Do you think that American sacred cultural sites are good places to develop as tourist attractions?”

## Conclusion

In conclusion, this thesis was an exploratory work, seeking to determine whether Native Americans are different than non-Native Americans when it comes to

environmental issues and practices. A general overview of Americans' environmental behaviors using the 2010 EPA report was given. It was noted that Native Americans' preservation of environment was in practice long before the EPA Indian Policy was implemented in 1984. A case for the application of multicultural theory to this thesis topic was presented, and the literature review included information about Americans and the environment, current environmental attitudes and behaviors, and Native Americans' relationships with the environment. On the basis of the cited narratives and within the framework of multicultural theory, the hypotheses for this thesis were tested using secondary data from the General Social Survey. Data from multiple years (1993, 1994 and 2000) was needed in order to generate a dataset that included enough Native American cases for statistical examination. Results indicated that Native Americans are generally no different than the rest of American society when it comes to the environmental attitudes and behaviors tested in this thesis. Nonetheless, this study is an important step in documenting Native American narratives, and highlights the importance of diverse, multicultural voices, especially as they relate to the environment.

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