

A Diné Conceptualization of Global Climate Change

An Application of a Diné Research Methodology

by

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## ABSTRACT

This study questioned how the Navajo Nation was going to mitigate and/or adapt to Global Climate Change. By employing a Diné philosophy based research methodology this study seeks to holistically reframe the lens that the Navajo Nation conceptualizes Global Climate Change. The study uses a comprehensive review of literature that pertained to four research questions. The research questions are: 1) What do Diné oral histories say about climate change? 2) How is the Navajo Nation going to mitigate and adapt to changes to the climate using Western knowledge? 3) How can Diné research methodologies help inform policies that will mitigate and adapt to climate change? 4) What type of actions and frameworks can the Navajo Nation use to generate meaningful policy? The study utilizes a Diné philosophy based analytical framework to focus on how climate change will affect the Diné peoples' A) spirituality, B) economic sustainability, C) family-community, and D) home-environment. The findings are: a) the Navajo spiritual ceremonies are process models that can be used to mitigate and/or adapt to climate change, and they must continue to be practiced. b) The economic development section revealed that economic security is not found solely in resource development, but in the security of ceremonial knowledge. The burden of the Navajo government however, is not to promote labor, but the ability for people to live into old age. c) Because families and communities drive Diné philosophy, Diné families and communities must remember how to treat each other with respect. The collective survival of the Navajo Nation always depended on this teaching. d) The findings of the home-environment section is that Diné have to acknowledge that their lives are fragile in the face of global climate change, and the only way that they can live happily is to trust the power of the stories of the ancestors,

and seek to embody the Diné philosophy. This study succeeded as an honest attempt to apply an Indigenous Diné methodology to reframe Global Climate Change into a phenomenon that is survivable.

Shimá doo shizhe'é, shimásání, shichéí, shádí, shinaa'íké, shidá'íké, shimáyázhí, shida'í  
yázhí, shiat'eed, shizeedíké, shitsooí, shinaa'ash, —Shizeedí yázhíyaa—

T'aa anołtso... ayóó nishní.

Di naaltsoos niháíishla.

This thesis is dedicated to the ancestors, the Diné people today, and the coming  
generations.

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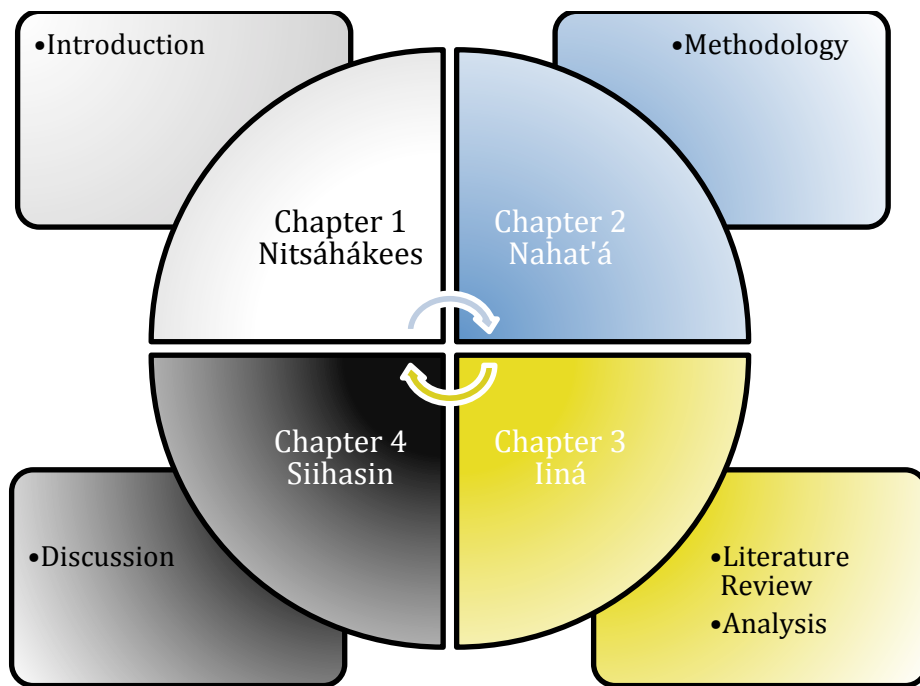
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## PREFACE

This thesis is an experimental application of a Diné research methodology and thus, is an expression of the Diné Fundamental philosophy of Sa'ah Naaghai Bik'eh Hozhoon (SNBH). By discussing and attempting to apply a Diné research methodology, this thesis is meta-literarily applying a Diné research methodology. The structure of the paper is divided into four chapters; the literature reviews four research questions; and the analytical framework used is based on two Diné ceremonies that organize the analysis into four binary sections of Diné society. In Chapter 2, the Nahat'á-Methodology section, I will go into depth on what significance the four sections hold in Diné thought.

To set the stage for this advanced theoretical discourse, the following figure illustrates the structure of the thesis:



*Figure 1.* Sa'ah Naaghái Bik'eh Hozhoon (SNBH) derived thesis structure

This structure moves clockwise and all four elements should be viewed as unified whole. Here the four rectangles represent the literal Western compartmental paradigm, and how each Western section informs the cyclical Diné methodology. The colors are sacred cardinal direction colors, and act as points of reference of what mode the Diné methodology is functioning in. If this Diné methodology is applied properly, all four sections should form a balanced expression and testing of an idea that might have a significant impact on Diné life.

## CHAPTER 1-NITSÁHÁKEES-INTRODUCTION

*Yá'át'ééh, Háshtl'iishnii nishlj; Tódichiinii ba'shish chin; Ta'néezhanii dah shicheii; Tl'áaschi'i dah shináí. Na'néelzhiin wolyedéé k'ehasht'i. I am of the Mud Clan; born to the Bitter Water Clan; my maternal grandfather's mothers are of the Tangle People; My paternal grandfather's mothers are of the "upper-area-of-the-face, painted-red" clan. I am pursuing this thesis because there is something changing in the world. White people have an idea what it is, and I seek to think about that idea in the Diné way. This idea can overwhelm a person with fear for the safety of all beings, earth-mom, sky-father, darkness, mornings, all six mountains, and to all the living beings, including human beings, that inhabit this world. I write these words in order to bring clarity and peace in my mind about how and why the "climate" is changing, and how the Diné are going to deal with this change. The goal of this paper is to have people become again in the beauty-harmony. It is in this goal that I write this paper.*

### **Introduction**

To gain an understanding of my Diné methodological approach, I employ an exciting system of knowledge found in Diné prophecy. The method, which recounts Diné prophecy, is often applied and discussed when the Diné are under extreme duress. Here the prophecy is used when the Diné were at war with world:

[The Diné] began to wonder why their gods had turned against them and in what manner they had failed to please them. One Blind Prophet dreamed that all Navajo people would perish and a new race would occupy their land. Many ceremonies were held, and gifts were carried to high places and laid on altars to appease the gods. Finally it was decided that four medicine men would make the journey to Tohe-he-gle (Meeting Place of Waters) and scan the 'Page of Prophecy' for an answer to their questionings. For this trip they chose the oldest and wisest medicine men, each from a different part of the Navajo country, and instructed them to meet at Black Rock to make their preparations. The whole Navajo nation started a period of prayer while the four chanters were going through purification rites, prayer ceremonies, and days and nights of fasting. They must put themselves on a higher plane than ordinary mortals before they could expect to receive any communication from gods who made their home on Tse-thanie-tsa. Five of the most important member of the Navaho pantheon of immortals were said to make their homes on the high rock call Tse-thanie-tsa, which overlooked the Shining Sands of Prophecy. There was a legend of a visit

from these gods, who, when they returned to their homes, left a trail which only holy ones might follow...<sup>1</sup>

The concepts found in, and the excerpt itself, have rarely been quoted or talked about in modern, non-traditional contexts. Tohe-he-gee was flooded when the Navajo Dam project was created in northwest New Mexico. This dam was apart of a Federal Bureau of Reclamation project in 1970s included an industrial irrigation, farm project and power plant.<sup>2</sup> The industrial farm project and the power plant are now a reality.

The Navajo Agricultural Products Industry (NAPI) is a profitable Navajo Nation agribusiness enterprise that uses genetically modified organisms, these technologies are counter to basic principle of Diné philosophy, in order to be profitable.<sup>3</sup> Both examples, the Navajo Dam Project and the NAPI, are representative of a small part of the sacrilege that has occurred to an immensely sacred place to the Diné. As Diné we must revisit and contemplate the meaning behind what has happened at Tohe-he-gee and explore how Global Climate Change fits into the continuing story of the Diné.

The history of Indigenous peoples has proven to be one that is definitive of resilience and that history has to be remembered. The history of climate change is as old as Indigenous cultures. Oral stories cite cataclysms and sometimes the cultures needed to

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<sup>1</sup> Franc Johnson Newcomb, *Hosteen Klah: Navaho Medicine Man and Sand Painter* (Norman u.a.: University of Oklahoma Press, 2012), 27.

<sup>2</sup> “CRSP Navajo Unit Home Page - Reclamation, Upper Colorado Region,” accessed March 30, 2015, <http://www.usbr.gov/uc/rm/crsp/navajo/>.

<sup>3</sup> “Navajo Farm Plants Genetically-Modified Seeds, Despite Global Protests | the Narcosphere,” accessed March 30, 2015, <http://narcosphere.narconews.com/notebook/brenda-norrell/2010/06/navajo-farm-plants-genetically-modified-seeds-despite-global-protest>; Bill Donovan, “A Good Year,” *Navajo Times*, May 24, 2007.

move to new worlds.<sup>4</sup> Indigenous peoples had traditional mechanism found in oral tradition and ceremony to critically understand how their cultures are shaped by the climate and environment. With this critical understanding, Indigenous peoples can understand that Western science and its data are just as valid as their “traditional knowledge”, and vice versa. Critically minded Indigenous researchers, who apply both the scientific and traditional methodologies and theories, will see that climate change will have long-lasting, drastic effects on their worlds.

The climate has always been changing, but the current change is caused by human (anthropogenic) development of energy resources that emit greenhouse gases (GHGs).<sup>5</sup> This “development” is at heart of the emergence and progress of what is known as “civilization.” The use of science and mathematics then, is subsidiary to the cultural philosophy of the people making the intellectual discoveries since they are merely the tools. What today's citizens of earth are seeing and experiencing, though drastic weather patterns, are the consequences of the actions of a society that applies little to no environmental ethics pertaining to natural resource development. In 2013, the Intergovernmental Panel on Climate Change (IPCC), a worldwide climate science review body, published the physical science portion of its 5<sup>th</sup> Assessment Report with the findings reporting that climate change “will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe,

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<sup>4</sup> Vine Deloria Jr., *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Golden, Colo.: Fulcrum Pub., 1997), 47.

<sup>5</sup> Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.), “IPCC, 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*” (Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA., n.d.), 2.

pervasive and irreversible impacts for people and ecosystems.”<sup>6</sup> The findings are so recent that the real impacts that could directly affect the Southwestern United States and the region that comprises the homeland of the Diné have not been fully researched and explored, especially since the latest research can only provide speculation of the effect that climate change will have on water resources.

According to the latest research concerning Navajo Nation water resources report:

[The] warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased...<sup>7</sup>

The findings of this study, as expressed in the quote, should be highlighted as a groundbreaking discovery since scientists rarely label their findings as “unequivocal” unless there is solid data suggesting so.

Because of the recent movements to deny that Climate Change exists, in both the Government and the general public, there are pressing concerns that the findings behind the current research may be too conservative, and that the situation is alarmingly unpredictable. Climate scientist used super-computers to generate Global Climate Models (GCMs) that predict water resources, among other potentially threatened ecosystems, but because of the unprecedented increase of the amount of Greenhouse Gases (GHG) in the atmosphere, the GCMs have become ultimately unreliable<sup>8</sup>. In earlier climate research,

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<sup>6</sup> Ibid., 8.

<sup>7</sup> Rajendra K. Pachauri et al., “Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change,” 2014, 2, <http://epic.awi.de/37530/>.

some data measurements were eventually found to be worse than the worst-case scenarios generated by the GCMs, which are used by IPCC studies.<sup>9</sup> This level of uncertainty is extremely important to the security of the Navajo Nation's water resources because any social policy planning for a permanent Navajo homeland requires reliable water resource data in order to create social policies that generate positive outcomes for the Navajo Nation.<sup>10</sup>

In the article, "Climate Change Impacts on the Water Resources of American Indians and Alaska Natives in the U.S." (2013), co-authored by Diné hydrologist Karletta Chief, the "key climate change impacts [in the Southwest are going to] stem from drought and flooding. Affect[ing] livestock, agriculture, water supply, water rights, soil quality, and aquatic species."<sup>11</sup> The Navajo already have a scarcity and supply issues and there are also "settled and unsettled water rights" that will have a significant effect on the Diné people and the region.<sup>12</sup> The impact Climate Change Colorado River watershed is further clarified by the United States government water reports.

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<sup>8</sup> Climate Change Reconsidered II, "Key Findings," *Climate Change Reconsidered II*, n.d., 8, accessed March 24, 2014.

<sup>9</sup> Daniel R Wildcat, *Red Alert!: Saving the Planet with Indigenous Knowledge* (Golden, Colo.: Fulcrum, 2009), 7.

<sup>10</sup> Nania, J., Cozzetto, K. Tapp, A.M. Chapter 4 - Water Resources. In *Considerations for Climate Change and Variability Adaptation on the Navajo Nation*, 2014, University of Colorado, Boulder, CO. 53; Melanie K. Yazzie, "Unlimited Limitations: The Navajos' Winters Rights Deemed Worthless in the 2012 Navajo-Hopi Little Colorado River Settlement," *Wicazo Sa Review* 28, no. 1 (2013): 27; 31.

<sup>11</sup> K. Cozzetto et al., "Climate Change Impacts on the Water Resources of American Indians and Alaska Natives in the U.S.," *Climatic Change* 120, no. 3 (October 2013): 577, doi:10.1007/s10584-013-0852-y.

<sup>12</sup> Nania et al., Chapter 4 - Water Resources In *Considerations for Climate Change and Variability Adaptation on the Navajo Nation*. 53



A 2012 United States Bureau of Reclamation report says that, the effect of climate change is going to be significant on the Colorado River. This report utilizes GCMs and the findings are incremental, reading like a farmer's almanac. The following is from the report:

Under the...GCM Projected scenario, the mean natural flow at Lees Ferry [current mean flow is approximately 15 million acre feet a year (MAFY)] over the next 50 years is projected to decrease by approximately 9 percent, along with a projected increase in both drought frequency and duration ...The range of this result varies amongst the individual GCM projections that comprise this scenario with some of the GCM projections showing a larger decrease in mean natural flow than 9 percent while others showing an increase over the observed historical mean. Droughts lasting 5 or more years are projected to occur 50 percent of the time over the next 50 years. Projected changes in climate and hydrologic processes include continued warming across the [Colorado River] Basin, a trend towards drying (although precipitation patterns continue to be spatially and temporally complex) increased evapotranspiration and decreased snowpack as a higher percentage of precipitation falls as rain rather than snow and warmer temperatures cause earlier melt.<sup>13</sup>

What this means is that in fifty years that there is going to be a decrease in 1.1 mAFY water in the Colorado River Basin. The data also finds that droughts are going to be more prevalent and overall the whole Basin will be more dry. We have to take these GCM with a grain of salt and see that because of the sharp increase of GHG, mainly carbon dioxide (CO<sub>2</sub>), many of the GCMs are inherently unreliable. But this does not mean that the increase in water is not a pressing issue related to climate change. In fact, there is a chance that the 9 percent decrease could be higher.

In order to secure its water resources the Navajo Nation has to utilize its unique Indigenous knowledge in order to help humanity, which means it is the duty of the Navajo to fix and/or adapt to climate change. The United Nations Education and Science

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<sup>13</sup> United States, *Colorado River Basin Water Supply & Demand Study* (Boulder City, NV: Bureau of Reclamation, Lower Colorado Region), accessed March 24, 2014, <http://purl.fdlp.gov/GPO/gpo27494>.

Organization (UNESCO) and the United Nations University (UNU) have extended a sincere offer to bring indigenous peoples into the climate change discussion. They see that:

...the observations and assessments of indigenous peoples and local communities offer valuable *in situ* information, provide for local verification of global scientific models and satellite data sets, and ensure that adaptation measures align with local needs and priorities<sup>14</sup>

This affirmation of indigenous knowledge places the Navajo Nation in a position to use its human capital to find solutions to securing its water resources, as well as to prioritize the knowledge of its people to help the United States fix and/or adapt to the climate change scenarios. Those scenarios will likely induce fear into the Navajo people, but the Navajo Nation can take the lead in showing the whole of humanity how courageous it is to “adopt [a] life-enhancing [culture that is in] a symbiotic relationship with nature”<sup>15</sup>.

My study looks to develop how the Navajo Nation will start this very process.

### **Purpose of Study**

This study relies on a Diné-centered research methodology, which I will define throughout the text. This methodology comprehensively reviews ways the Navajo Nation is going to mitigate and/or adapt to modernly unprecedented Global Climate Change (GCC). This will be done by applying an experimental analytical framework, which contextualizes four cardinal pillars of Diné society as the discourse focus of the Diné people.

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<sup>14</sup> D. J Nakashima et al., *Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation* (Paris; Darwin: UNESCO ; UNU-IAS, 2012), 25.

<sup>15</sup> Wildcat, *Red Alert!*. 12.

## **Research Questions**

The primary research question is: How, in the face of unprecedented climate change, is the Navajo Nation going to mitigate and adapt to Global Climate Change (GCC)? I intend to answer this question by contextualizing Diné oral accounts of mitigating and adapting to cataclysmic events into Navajo Nation focused Western science public policy terms. It is imperative that I also conduct a comprehensive literature review and critical analysis to address the following secondary research questions:

- What do Diné Oral Histories say about Climate Change?
- How is the Navajo Nation going to mitigate and adapt to changes to the climate using Western knowledge?
- How can Diné research methodologies help inform policies that will mitigate and adapt to climate change?
- What type of actions and frameworks can the Navajo Nation use to generate meaningful policy?

## **Significance**

Global Climate Change is an unprecedented reality and now, the current time, is the most important time to the health of Indigenous peoples. Historically and philosophically, Indigenous peoples had maintained intimate relationships with ecosystems and now those systems are going change to a version not seen by humans before. The only entities that can remember this change are the earth and sky themselves.<sup>16</sup>

This research is significant to all people, regardless of background, but Indigenous peoples are key stakeholders because they are usually the most disenfranchised and have the most to lose because of their spiritual relationship to the

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<sup>16</sup> Ibid., 17.

earth. Historically, Indigenous peoples have not and do not necessarily benefit as much from non-Indigenous, settler community responses to climate change, which are typically organized as electorate power bases of modern democratic societies. Most importantly, Indigenous peoples have special knowledge to develop a society that becomes a counterpart of the environment the society is based in.

The Navajo Nation will, undoubtedly, be among the first Indigenous peoples to develop climate change mitigation and adaptation policies that reflect an Indigenous paradigm. Not only because the dominant Western paradigm is not sustainable, but because the Navajo Nation land base and population are larger than others, and their culture and philosophy can still provide a foundation to facilitate and promote such a change under an indigenous paradigm.

### **Limitations**

This project has limitations primarily in the vast amount of quantitative sources available, that is the amount of data generated on Climate Change. Because of this challenge, this study will focus on the quality and applicability of selected recourses; in other words this study will rely primarily on qualitative studies and analyses. My thesis is innovated and takes a significant leap from general and previous studies since I implement and apply a theoretical “Indigenous –Diné research methodology.”<sup>17</sup> The Diné research model requires knowledge of esoteric ceremonial knowledge, and a deep fluency of the Diné language and culture in order to allow for the extraction of deep concepts so other non-Indian and non-Dine can fully grasp my research purpose and projected

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<sup>17</sup> Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto: University of Toronto Press, 2009).

outcome. Another minor challenge is that I am not a trained Diné medicine person and am not fully fluent in the Diné language, and I believe that this study will only present some advanced Diné concepts from a beginner's perspective: but this study is a start to a much grandeur discussion that will take place. Future research in this area should require researchers to have Diné language proficiency, which will lead to a much more complete result that delves deeper into the esoteric.

### **Ethical Considerations**

Some of the topics researched in this study are considered sacred ways of thinking, and therefore protected knowledge. I underwent an intense literature review because I am aware that I have to submit my research to the Navajo Nation Institutional Review Board and/or the Navajo Office of Historic Preservation if I attempt to interview Diné elders and/or medicine men/women. All of the autobiographies that I use and apply can be found in Arizona State University's Hayden Library and from searchable online repositories that have unlimited access. I have toiled to prioritize accounts of interviewees who made their identities accessible and consented to the publication of their knowledge as a safeguard against any potential exploitation. Some of the older autobiographies use pseudonyms for informants, and for the most part those autobiographies were not central to this study. My interpretations of the research are solely my view and do not constitute the ultimate views of the Diné people. It is with the deepest respect for my Diné people that I conducted this research, and it is for the future generations that I do my work.<sup>18</sup>

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<sup>18</sup> Linda Tuhiwai Smith, *Decolonizing Methodologies* (London: ZED BOOKS LTD, 2012), 125.

*Note: “Diné”, “Diné people”, “Navajo”, “Navaho”, and “Navajo Nation” are all used interchangeably.*

## CHAPTER 2-NAHAT'Á-METHODOLOGY

### **Introduction**

This study opened with center aligned italicized text, which can be called meta-writing and a prayer that was created the moment my hand typed them into existence. The English translated portion does not have proper grammar, but in that text is a connection of the two epistemologies that is hinted at further in the Introduction. The English translation shows that there is a mixture of English and Diné epistemologies. Along with these epistemologies, this thesis also follows the American Indian studies paradigm as framework of research.<sup>19</sup> This allows for more theoretical Diné discourse to occur. In privileging oral narratives and Indigenous knowledge, I am seeking to rely on concepts of Indigenusness when evaluating events and ideas of climate science. This process falls in line with what a decolonized Diné research methodology is, and reveals how the analytical framework is derived from a Diné-centered approach to research.

### **Decolonizing Methodology**

This study is a qualitative study that relies on a comprehensive literature review in order to apply the principles of a decolonized Diné Research Methodology. On the surface this study can be viewed as a thesis that utilizes the American Indian Studies paradigm as well as a decolonization theoretical framework. The epistemic base of this methodology is derived from oral narratives and is an example of Linda Tuwihai Smith's Decolonizing Indigenous Research project of "Reframing" and "discovering the beauty of our knowledge". By "taking...greater control over" the problem of climate change,

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<sup>19</sup> James Riding In, "Editor's Commentary," *Wicazo Sa Review* 26, no. 2 (2011): 5–12, doi:10.1353/wic.2011.0017.

this thesis discusses and analyzes climate change from a Diné perspective and not solely from a western scientific perspective.<sup>20</sup> By applying a Diné research methodology I am making the Diné “indigenous knowledge systems work” for the development of innovative Diné science related public policy.<sup>21</sup>

### **Diné Paradigm Approach**

My approach to my work is to take an additional step beyond the literature and data reviews of the current scholars and create a unique process of research based on the Diné epistemic, Indigenous paradigm. My approach accepts that a Diné paradigm is whole and just as complex as western epistemologies, but it also postulates that it is at times superior.<sup>22</sup> An Indigenous Navajo Research methodology, realized in a western academic institution, uses knowledge to ethically bridge Navajo knowledge and Western knowledge.<sup>23</sup> This bridge gives context to both knowledges on how scholars from either backgrounds should start making choices on how to understand the way that both cultures are going to mitigate and adapt to the changing climate.<sup>24</sup>

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<sup>20</sup> Smith, *Decolonizing Methodologies*, 154.

<sup>21</sup> Ibid., 161.

<sup>22</sup> Nancy Cottrell Maryboy and David H. Begay, “Living the Order: Dynamic Cosmic Process of Dine Cosmology. Nanit’a Sa’ah Naaghai Nanit’a Bik’eh Hozhooon” (Ph.D., California Institute of Integral Studies, 1999).

<sup>23</sup> Gregory Cajete, *Native Science: Natural Laws of Interdependence* (Santa Fe, N.M.: Clear Light Publishers, 2000).

<sup>24</sup> Nakashima et al., *Weathering Uncertainty; Wildcat, Red Alert!*.



## What is a Diné Research Methodology?

A “Diné Methodology” is inherent in Diné people, but is a burgeoning academic idea that is being developed by Diné scholars .<sup>25</sup> A comprehensive literature review will help Diné scholars to contextualize the interrelationship the Diné methodology with applied western sciences. Shawn Wilson in his book, *Research is Ceremony: Indigenous Research Methods* (2009), writes that his purpose is to clarify how “being” Indigenous in the “research process” is the “basis of a Indigenous research method”.<sup>26</sup> In my study being Diné is central to the methodology and being Diné means living the Diné philosophy (which will be defined further down in this section).

My study also seeks to dialogue between the positivist science and Diné methodology. First Nations scholar, Margaret Kovach, writes this about such efforts:

There is a desire among a growing community of non-Indigenous academics to move beyond the binaries found within Indigenous-settler relations to construct new, mutual forms of dialogue, research, theory, and action. As long as the academy mirrors a homogenous reflection of bodies, minds, and methods, our move in this direction is stalled. The infusion of Indigenous knowledge systems and research frameworks informed by the distinctiveness of cultural epistemologies transforms homogeneity. It not only provides another environment

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<sup>25</sup> Note: *Farella is not Diné* John R. Farella, *The Main Stalk: A Synthesis of Navajo Philosophy* (Tucson, Ariz: University of Arizona Press, 1984); Wilson Aronilth, *Diné Bi Bee Óhooa’ah Bá Silá* (Center for Dine Studies, Navajo Community College, 1994); Herbert John Benally, “Navajo Philosophy of Learning and Pedagogy,” *Journal of Navajo Education* 12, no. 1 (January 1, 1994): 23; Milford B. Muskett, “Identity, Hozho’, Change, and Land: Navajo Environmental Perspectives” (Ph.D., The University of Wisconsin - Madison, 2003); Lloyd L. Lee, “21st Century Dine Cultural Identity: Defining and Practicing Sa’ah Naaghai Bik’eh Hozhoon” (The University of New Mexico, 2004); Herbert John Benally, “Hozhoogo Naashaa Doo: Toward a Construct of Balance in Navajo Cosmology” (California Institute of Integral Studies, 2008); Raymond D. Austin, *Navajo Courts and Navajo Common Law: A Tradition of Tribal Self-Governance* (Minneapolis: Univ Of Minnesota Press, 2009); Ferlin Clark, “In Becoming Sa’ah Naaghai Bik’eh Hozhoon: The Historical Challenges and Triumphs of Dine College” (The University of Arizona, 2009); “Understanding Hózhó to Achieve Critical Consciousness: A Contemporary Diné Interpretation of the Philosophical Principles of Hózhó,” in *Diné Perspectives: Revitalizing and Reclaiming Navajo Thought*, 2 edition (Tucson: University of Arizona Press, 2014).

<sup>26</sup> Shawn Wilson, *Research Is Ceremony: Indigenous Research Methods* (Black Point, N.S: Fernwood Publishing Co., Ltd., 2009), 19.

where Indigenous knowledges can live, but changes the nature of the academy itself. Indigenous methodologies disrupt methodological homogeneity in research.<sup>27</sup>

I also provide a more than transformative study that is affirmative of the power of Diné thought, in particular.

Diné scholar Lloyd Lee edited *Diné Perspectives: Revitalizing and Reclaiming Navajo Thought*, which is a book that seeks to understand that Diné phrase, Sa'ah Naaghái Bik'eh Hózhon (SNBH), is a sacred foundation of Diné epistemology.<sup>28</sup> SNBH is central to Maryboy and Begay's paradigm and is also the important foundation of my study. SNBH encompasses the Diné philosophy, and this philosophy is the foundation for the structure, research questions, and the analysis method of this thesis.

It is challenging to listen and/ or read to the oral narratives of medicine people that have passed on. What is interesting is that their literary record is still an extension of their spirit or what is known among the Dine as their "spiritual being."<sup>29</sup> What precipitates from knowing that pieces of their knowledge exists in the stories, at first is anxiousness, but as I am writing and as you are reading this, we, the readers, should be encouraged by their words because they are the example of the appropriate way to "be" when researching such content. In *Indigenous Methodologies: Characteristics, Conversations, And Contexts* (2009), Margaret Kovach writes that oral stories must be treated with respect, and that not knowing the epistemology of the people the story comes

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<sup>27</sup> Kovach, *Indigenous Methodologies*, 12.

<sup>28</sup> Lloyd L. Lee, ed., *Diné Perspectives: Revitalizing and Reclaiming Navajo Thought*, 2 edition (Tucson: University of Arizona Press, 2014), 1;5.

<sup>29</sup> "Understanding Hózhó to Achieve Critical Consciousness: A Contemporary Diné Interpretation of the Philosophical Principles of Hózhó," 26.

from then the chance for “misrepresentation” can occur.<sup>30</sup> Kovach then says: “To attempt to understand tribal stories from a Western [‘apolitical’, ‘acultural’] perspective (or any other cultural perspective) is likely to miss the point, possibly causing harm.”<sup>31</sup> These stories can become tangible experiences of learning if the listener understands the “holistic package” of the story.<sup>32</sup> Currently, some Diné scholars have made great strides in developing Diné thought into an academically digestible model so that non-Dine can understand and apply such concepts.

Diné scholars Nancy Maryboy and Harry Begay created or recreated a paradigm model in their unpublished dissertation titled, *Living the Order: Dynamic Cosmic Process of Dine Cosmology. Nanit'a Sa'ah Naaghai Nanit'a Bik'eh Hozhoon* (1999), to discuss the importance of Diné epistemology. Explaining the intellectual foundation of this epistemology, Maryboy and Begay write:

we are using a paradigm model to illustrate the cosmic process. Although one must keep in mind that a paradigm model is only a replica of the cosmic order, it is nevertheless a reflection of a mental process through which we can articulate Navajo cosmic thinking.<sup>33</sup>

Because there is so little published about Diné methodologies, I rely heavily from Maryboy and Begay to define the Diné paradigm that informs a Diné research methodology.

Maryboy and Begay define the paradigm as:

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<sup>30</sup> Kovach, *Indigenous Methodologies*, 97.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid., 101.

<sup>33</sup> Maryboy and Begay, “Living the Order,” 252.

emphasiz[ing] certain concepts, among which we include the Four Sacred Mountains, the traditional teachings of the four cardinal directions within an integrated earthly and cosmic alignment, and the seasonal cyclical change of regenerated growth, in order to illustrate [Diné] organization of knowledge.<sup>34</sup>

Maryboy and Begay stress the importance of this cosmic order by emphasizing the sacredness of the four directions in Diné traditional thought and knowledge.

These four directions are:

*Nitsáhákees*: A mental image provides an awareness of need and the cognitive process of thinking begins. Thinking emerges out of the holistic cosmic consciousness. The content of thinking is being organized as the process proceeds to *nahat'á*, but *nitsáhákees* remains part of the process. A very simplistic translation would be "thinking." In addition other relationships are generally associated with *nitsáhákees*: The direction of the east, the color white, the process of dawn, the season of spring, the process of birth and age of childhood, the east mountain *Sisnaajini* (Blanca Peak in Colorado).

*Nahat'á*: A planning process through which experience and data furnish information that is integrated with stabilized knowledge from the previous process of *nitsáhákees* in order to act for a life-protecting and life-enhancing purpose. Implicit in the planning process is constant reciprocal communication within an integrated whole. Very simplistic translations would be "planning," "communication," "organization" or "structural order." Relationships associated with *nahat'á* are: the direction of the south, the color turquoise-blue, the process of midday, the season of summer, the age of adolescence, the south mountain - *Tsoodzil* (Mt. Taylor in New Mexico).

*Liná*: A process that is characterized by vitality, dynamism, living, in a regenerative and cyclical manner. This is a process of application to life and implementation, and is thus operational. A simplistic translation would be "living" or "acting". Relationships associated with *liná* are: The direction of the west, the color yellow, the process of evening twilight, the season of autumn, the age of maturity, the west mountain - *Dook'o'osliid* (San Francisco Peaks in Arizona).

*Siihasin*: This is a transformational process of developing a strong sense of confidence and assurance, derived from having firmly established proper thinking, planning and living. It is a level of personal growth accompanied by strong feelings of self-identity, self-esteem and satisfaction of accomplishment

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<sup>34</sup> Ibid., 253.

through the stabilization of one's existence. This stage of the process indicates a strong internalization of the teachings. There is no simple translation of *siihasin*, although it might be termed as a self-evaluation process leading to assurance and security. Relationships associated with *siihasin* are: The direction of the north, the color black, the process of darkness of night, the season of winter, the process of old age, the north mountain· *Dibe Nitsaa* (Mt. Hesperus in Colorado).<sup>35</sup>

In my study I omit two elements of Diné “cosmic process”: Earth-Mom and Sky-Father, which exist “on an omniscient axis” as the “nadir” and “zenith” respectfully.<sup>36</sup> These two “directions” are the third dimension of the foundation of the four directions. Begay and Maryboy also discuss the paradigm in terms of it reaching into five dimensions, but due to the objectives this paper, the additional dimensions will not be included in this analysis of how the NN will address global climate change.<sup>37</sup> Nonetheless, it is important for the reader know of these other dimensions. The four directions, quoted extensively above, are used to organize this study into its “thinking”-Chapter 1, “planning” Chapter2, “living” – Chapter 3, and the “self – evaluation” of Chapter 4. This structure is explained more by Begay and Maryboy.

The structure of Begay and Maryboy’s paradigm is organized four sections, Nitsáhákees, Nahat’á, Iná, and Siihasin . Begay and Maryboy give reason for this structure:

[T]he curriculum has been organized into four interlinking cyclical processes, in conjunction with the teachings and values of the Four Sacred Mountains. Within each of these four cycles, are four more directional alignments, governed in turn by the same directional processes as the original four. These processes are all part of an enfolding and implicate order.

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<sup>35</sup> Ibid., 338–339.

<sup>36</sup> Ibid., 328–329.

<sup>37</sup> Ibid., 329.

These processes can continue infinitely, as an unending fractal matrix, a geometrical pattern of infinite cycles and complexity...<sup>38</sup>

Because of space limitations, my thesis follows this structure to only four cardinal sections and that is why there are four chapters. Within these chapters are the four elements encased in them. As this is one of the first papers to apply such a paradigm, the structure will also include the western-style of organization as demanded by academia, but the lengthy methodology discourse exhibited above should initiate an understanding not only a Dine modeled paradigm, but in a synthesis of Dine epistemologies that can be presented to the wider “academic” community.

Begay and Maryboy explain, “[u]nderstanding the process of the order leads to an awareness and understanding of the actual order”.<sup>39</sup> This paper is a part of the process of “understanding”. In the analysis section a Diné analytical framework model will be utilized to analyze the affect global climate change will have on the NN.<sup>40</sup>

### **Analysis Framework Method**

The literature review will be analyzed by using a unique Diné analytical method. Diné scholar Herbert John Benally precipitates this framework from the Diné epistemology. Benally’s framework is a rare piece of scholarship that utilizes the oral record and interviews with current Diné medicine man in order to create an original analytical framework that can be used in academia.<sup>41</sup> This framework is most valuable

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<sup>38</sup> Ibid., 362.

<sup>39</sup> Ibid., 252.

<sup>40</sup> Benally, “Hozhoogo Naashaa Doo,” vi.

<sup>41</sup> Ibid., 43–44; 47.

for any future Diné focused scholarship because of the amount of interaction Benally had with Diné medicine men probably is too hard to ethically reproduce. The end product of Benally's research, the analytical framework, should be viewed as Diné medicine man certified tool that can be utilized by Diné scholars in order to analyze ideas from a Diné perspective. In honor of Benally's achievement, I use this analytical framework in its simplest form.

Benally's framework utilizes the Diné "Prostitution Way" and the "Flint Way" protection prayers in order to analyze what effects "...a choice will have on Diné: ...spirituality, ...economic sustainability, ...family and community, and ...home-place and environment."<sup>42</sup> This "diurnal" framework has at its core SNBH, which makes it different from the usual policy recommendations that are shown in the Western science policy papers or studies, like *Considerations for Climate Change*, and because the most important analysis focuses on Dine spirituality.<sup>43</sup> *Considerations for Climate Change*, on the other hand, focuses on Western science natural resources topics like risk management, water resources, and the sort. And this does not appropriately fit within the Diné worldview because of the "apolitical" and "acultural" nature of Western science.<sup>44</sup>

This analysis method is in burgeoning stages of development because there are few Diné scholar willing or capable of doing this type of study because the rich nature behind these ceremonies and spiritual teachings are esoteric and requires a deep understanding and respect of the lived experience of being Diné, making it difficult for

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<sup>42</sup> Ibid., vi.

<sup>43</sup> Ibid.

<sup>44</sup> Kovach, *Indigenous Methodologies*, 97.

outsiders to understand. I am fully Diné, by blood, culture, and spiritually, I believe that the deeper meaning of the prayers can be fully understood by understanding people who have high levels of Diné phenomenological knowledge. For example, Benally created a framework that is meant to study the consequences public policy choices will have on Diné society. My effort is to take this a step further to bring out the Diné perspective as well.

The majority of the analysis is done by quoting core teachings offered by Frank and Rose Mitchell and other Diné oral narratives. It is no coincidence that a man and wife is the core of informing this analysis. It is because their narratives, together, form a literal manifestation of what *is* SNBH. It makes sense to Dine people, who were raised traditionally, to respect the significance that these two provided teachings as parents would to children; this is in direct line with Dine philosophy.

### **Summary**

My thesis is a comprehensive literature review that applies a Diné research methodology, which is informed by an Indigenous methodology in that it is an example of a decolonizing, “reframing”, and “appreciating” the beauty of the Diné peoples’ knowledge. A Diné methodology synthesizes the work of Wilson, Kovach, and Diné scholars and creates a paradigm that centers scholarly inquiry following the idea of SNBH as central to the discourse. The second portion of this section defined a Diné-centered analytical framework.

The analysis portion of the review relies heavily on a framework developed by Diné scholar Herbert Benally. The Navajo analytical framework is derived from two



Protection Prayers of the Diné people. These prayers look to understand the consequences choices will have on the “...spirituality, ...economic sustainability, ...family and community, and ...home-place and environment” by utilizing oral narratives to develop the direction that Diné science public policy should take in mitigating and adapting to GCC.

At the surface the methodology of my study is highly comparable to decolonizing methodologies and builds toward a Diné paradigm model that employs a Diné derived analytical framework. The challenges of such an undertaking being the researcher needs to have a high level of Diné cultural knowledge and language in order to fully understand the depth and scope of a Indigenous-Diné research methodology. The next chapter will be the Iná-living section that contains the Literature Review and the critical analysis.

## CHAPTER 3-IINÁ-LITERATURE REVIEW & ANALYSIS

### Literature Review

The following are the research questions reviewed:

- What do Diné oral narratives say about climate change?
- How is the Navajo Nation going to mitigate and adapt to changes to the climate using Western methods?
- How can a Diné research methodology help inform policies that will mitigate and adapt to climate change?
- What type of actions and frameworks has the Navajo Nation used to generate meaningful policy?

*What do Diné oral narratives say about climate change?*

There are approximately nineteen texts that are full-length autobiographies of Diné men and women. These books are most valuable in understanding the epistemology of the Diné people because they are evidence of an original Diné epistemology. Encoded in each narrative are instances where researchers can extrapolate, to a certain degree, the axiology, phenomenology, ontology, and etiology of what are essentially representations of Diné epistemology.<sup>45</sup> In this section I review and examine these important Diné texts as they relates to the mitigation and/or adaptation to climate change.

The quality of the Diné narratives vary from secular “folk-tales” studied by anthropologists, to extended complex interviews. For instance, in *Gregorio, The Hand-Trembler: A Psychobiological Personality Study of a Navajo Indian* (1949), we see that the authors Alexander and Dorothea C. Leighton state that the purpose of their monograph was to make a social science personality study of Navajo people in order to

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<sup>45</sup> Wilson, *Research Is Ceremony*, 20.

increase “Navaho” literature.<sup>46</sup> But it is later in such books like, *Tall Woman: The Life Story of Rose Mitchell* (2001) and *Navajo Blessingway Singer: The Autobiography of Frank Mitchell* (1978), where the interviews, through respectful research, becomes complex discourse about humanity.<sup>47</sup> The way I classified the narratives was to read the introductions and determine whether they were written solely from a social science/anthropological perspective or did the tone of the narrative read more as a journalistic interview.

The first and oldest publication of a Diné autobiography is of *Left Handed, Son of Old Man Hat* and it was published in 1938.<sup>48</sup> Then followed by “A Navajo Autobiography” (1947), (an autobiography of a Diné medicine man, Old Mexican).<sup>49</sup> Because these two texts present are “autobiographical”, indigenous scholars must be cognizant of their content. Dakota historian Waziyatwin and Brill de Ramirez assert that scholars have to be critical of source that have been translated from Native languages, since some material may incorrectly translate oral sources.<sup>50</sup> Following this

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<sup>46</sup> Alexander H. Leighton and Dorothea Cross Leighton, *Gregorio, the Hand-Trembler*, vol. 40, no. 1, Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University (The Museum, 1949), 3.

<sup>47</sup> Rose Mitchell and Alexander Street Press, *Tall Woman The Life Story of Rose Mitchell, a Navajo Woman, C. 1874-1977*, 1st ed (Albuquerque: University of New Mexico Press, 2001); Frank Mitchell, Charlotte Johnson Frisbie, and David P McAllester, *Navajo Blessingway Singer: The Autobiography of Frank Mitchell, 1881-1967* (Albuquerque, N.M.: University of New Mexico Press, 1978).

<sup>48</sup> *Left Handed, Left Handed, Son of Old Man Hat: A Navajo Autobiography* (U of Nebraska Press, 1938).

<sup>49</sup> Old Mexican and Walter Dyk, *A Navaho Autobiography*, vol. no. 8., Viking Fund Publications in Anthropology (Johnson Reprint Corp, 1947).

<sup>50</sup> Waziyatawin Angela Wilson, *Remember This!: Dakota Decolonization and the Eli Taylor Narratives*, trans. Wahpetunwin Carolyn Schommer (Lincoln: University of Nebraska Press, 2005), 24; Susan B. Brill de Ramirez, “The Resistance of American Indian Autobiographies to Ethnographic Colonization,” *Mosaic: A Journal for the Interdisciplinary Study of Literature* (Univ. of Manitoba, Winnipeg) 32, no. 2 (1999): 59.

recommendation, I apply care and inform readers where some conclusions or translations in the text should be read and held with some concern. I am after all, a Dine working with unofficial Diné texts. Nonetheless, by looking into these two book-length autobiographies I try to see and listen past the written translations and get into a sacred space where the memories of my ancestors are preserved.

I have identified two types of autobiographies. The one is of everyday Diné men and women and the other is of the hatałii (medicine singers). In terms of this study I will be focusing on the narratives of the hatałii because they are the few instances where climate, typically associated with the end of the world, is explicitly addressed. A complete bibliography classifying these narratives will be included in the appendix. Robert McPherson in his book, *Dinéjí Na`nitin: Navajo Traditional Teachings and History* (2012), does a commendable job of compiling some of the stories and presents a respectable account of Dine prophecy.<sup>51</sup> But, McPherson leaves out Hosteen Klah's most important statement, which is the narrative that explains a most sacred prophecy process in opening of this thesis. I believe that the omission was accidental, but this does not discredit the work of McPherson.

The following five texts are most important to this study as they speak specifically of the climate and of its effects or changes in the future. In the texts a change in the climate is associated with catastrophic change, typically marking the beginning or the ending of worlds. The most important and possibly the least veracious autobiography

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<sup>51</sup> Robert S. McPherson, *Dinéjí Na`nitin: Navajo Traditional Teachings and History* (Boulder: University Press of Colorado, 2012).

is *Hosteen Klah* (1964).<sup>52</sup> This text is written from the point of view of the Franc Newcomb, the non-Diné female researcher who “collected” his autobiography. Hosteen Klah is an intriguing figure because of the choices he made to reveal and travel with bilagaana (white) people and his openness to share elements of his life story to them. Klah reveals the location of a holy site as well as its description, its traditional place, and its significance as a place for spiritual leaders to prophesize. Although the “Shining Sands of Prophecy” are not mentioned, the Diné view and current history of this place is illustrated in John Redhouse’s, *Holy Land: A Navajo Pilgrimage back to Dinetah* (1985).<sup>53</sup> What is important to note about the Shining Sands of Prophecy is the process that the spiritual leaders would endure to facilitate divination at the Shining Sands. Four of the most wise and respected medicine men would prepare themselves through various rituals. Some climate scientists look to this “Indigenous Knowledge” as a viable information source.<sup>54</sup> *Hosteen Klah* is hugely important for understanding how traditional Dine science works.

The next text of great significance is *A Navajo Legacy: The Teachings of John Holiday* (2011). McPherson collected the autobiographies from Diné medicine men residing in Utah area in the 1980s and up until 2001. John Holiday’s collections provide a

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<sup>52</sup> Newcomb, *Hosteen Klah*.

<sup>53</sup> John Redhouse, *Holy Land: A Navajo Pilgrimage back to Dinetah* (Albuquerque, N.M.: Redhouse/Wright Productions, 1985).

<sup>54</sup> M. L. Roland, *Indigenous and Neotraditional Knowledge Systems and Their Role in Creating and Maintaining Ecological Sustainability* (Oxford: Eolss Publishers. < [http://: www. eolss. net](http://www.eolss.net), n.d.), 2, accessed January 22, 2015.

more specific detail of how a changing climate was going to affect the Diné. For example, McPherson quotes Holiday on the changing climate and its consequences:

When the Navajo first entered this world, it was said that the seasons--winter and summer--would shorten. They would get to the point where they would pass over each other and change places. This changeover will signal the end of this life and a new beginning, which will occur without warning. There will be now suffering and it will happen as quickly as lightning. People will be sitting here, and the next thing they know, there will be a change. They will not feel or see what happened.<sup>55</sup>

“Changeover”, as Holiday is purported to say, is very significant because it speaks directly to the term used today to describe environmental catastrophic events: climate change. John Holiday further explains that before the change occurs:

...all of the medicine men will be taken alive and returned to the sacred mountains. These men will not die but will be put into the mountains and mesas around us and kept there until the changeover is completed. Those who sing the ceremonies like Blessingway will later be released to return and carry on the sacred religion of the people. We will once again live like we did before every thing took place.<sup>56</sup>

John Holiday discusses further the elements of how this “changeover” is going to happen. In terms of climate he says: “Last summer’s season is still here today, and yet it is now mid-winter. And when mid-summer comes it will be like winter. Things will freeze, and the snow will fall all the way to mid-summer. The crossover is happening.”<sup>57</sup> Holiday then goes to say that the changeover has always happened and that the Anasazi or Mexican societal collapse is evidence of the last changeover.<sup>58</sup> He says that “[The

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<sup>55</sup> John Holiday and Robert S. McPherson, *A Navajo Legacy: The Life and Teachings of John Holiday* (Norman: University of Oklahoma Press, 2011), 285.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid., 287.

changeover] is something that has been going on forever and will continue...The Navajos will never cease but will live again after the new world has come”<sup>59</sup> McPherson also collected information in his current text of a Diné elder, Jim Dandy.

Jim Dandy was raised by his Grandparents. His grandfather was a hataalii and taught Jim a lot of ceremonial and spiritual knowledge, but when Jim showed an interest to learn more, his Grandfather denied him and told him to gain a Western education.<sup>60</sup> Jim’s Grandfather told him that the sacrifice of being a hataalii was something he did not wish for Jim. Later in life Jim became a member of the Mormon Church. Jim relates the world is going to end:

[The Enemy Way] ceremony should never be held after the Yé’ii Bicheii ceremonies have started, but it is happening. That is why there is a mixing of the seasons with warm winters and cold summers. By mid to late October seasonal change has ended, freezing has taken place, the harvest is in, and people say, “Put all your medicine bundles away and start the Yé’ii Bicheii ceremony.” They are afraid and complaining about what is going on now and feel that the climate has changed quite a bit. This is what has caused the changes, so now a lot of thundering takes place after the ceremonies and male lightning strikes in the winter

What is important is the phrase “climate has changed.” The climate has indeed changed, and Jim Dandy was told that it was because of people not stopping the ceremonies on time. To not stop the ceremonies is not only unnatural but sacrilege. Not respecting the Natural Laws is communication to natural elements that we do not respect them as our

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<sup>58</sup> Ibid., 286.

<sup>59</sup> Ibid., 285.

<sup>60</sup> Robert S. McPherson, Jim Dandy, and Sarah E. Burak, *Navajo Tradition, Mormon Life: The Autobiography and Teachings of Jim Dandy* (Salt Lake City: University of Utah Press, 2012), 92.

relatives and consequential misfortune caused by the Earth and Sky should then follow.<sup>61</sup>

This where Frank Mitchell relates other phenomenon that marks a change in the environment:

I know the world is coming to an end before much longer because we are beginning to see plants around here I never saw before. Also there are birds and animals I have never seen before. I do not believe evil spirits will take over at the end like the priests say. These new plants and animals will.<sup>62</sup>

Mitchell's describes invasive species and their effects on the ecosystem. An imbalance in spiritual will cause an imbalance in the physical realm. Milford Muskett, Diné land resource scholar, writes in his dissertation that human caused changes have increased so quick that sustainable human societies, like traditional Diné society, cannot reconcile the changes quick enough.<sup>63</sup> Thus, an accelerated change in climate creates an alien environment that allows alien species to find niches and begin to dominate the landscape.

McPherson in *Dinéjí Na`nitin*, uses the same Jim Dandy, Frank Mitchell, and John Holiday's accounts I used in the "Gambling on the Future" section of his book to showcase the prophesy of the hataa'ii.<sup>64</sup> In researching through the Oral narratives about climate change and/or the ending of the world I quickly identified all three accounts as being key to talking about climate change. While doing my research, I found at this particular juncture that it was quite a coincidence to find these three oral accounts by the same men, which is telling that I was looking in the right places. As a Dine scholar I

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<sup>61</sup> Austin, *Navajo Courts and Navajo Common Law*, 85.

<sup>62</sup> Mitchell, Frisbie, and McAllester, *Navajo Blessingway Singer*, 314.

<sup>63</sup> Muskett, "Identity, Hozho', Change, and Land," 202.

<sup>64</sup> McPherson, *Dinéjí Na`nitin*, 237.



cannot help but acknowledge situations that may seem mere coincidence to others, but poetic to the Dine.

Of the books in my research, only one other “haatahii” commented on the future. *Walking Thunder: Diné Medicine Woman* (2001) is an autobiography of a Diné woman hatahii, which is quite rare. This text is interesting because again the future is quickly discussed. Walking Thunder says:

My grandpa taught me about the circle of life. It’s a different understanding from the talk about heaven and hell and the end of the world. One night I dreamed about the future. The world will not end. Rather, the world is going to change. Part of the United States is going to be missing. There won’t be a Maine or a California. One of my elders says there will only be four cities at that time. The world won’t change with fire and it won’t change with thunder. Some people will survive and some will not survive. The people who made preparations will survive.... One should get ready by paying attention to only one day at a time...<sup>65</sup>

It is interesting to note that a small interview of Walking Thunder’s teacher, a Hatahii named Don Hoskie or One Who Walks Away is included in this text.<sup>66</sup> To have teacher and apprentice both interviewed is quite rare. Exciting is how Walking Thunder’s account is similar to John Holiday’s in its assurance that people will survive the “change”. The last and most important text is Frank Mitchell’s wife, Tall Woman (a.k.a. Rose Mitchell).

*Tall Woman The Life Story of Rose Mitchell, A Navajo Woman* (2001), is valuable autobiography because authentic Diné woman values are poetically expressed in a manner that her words seem to incandescently shine from the pages.<sup>67</sup> Her voice is that of

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<sup>65</sup> Kern L. Nickerson, *Walking Thunder: Diné Medicine Woman*, ed. Bradford Keeney (Philadelphia, Pa.; Chicago, IL: Leete’s Island Books, 2001), 149–150.

<sup>66</sup> *Ibid.*, 157.

a respected elder someone who I, and other Dine, may have been frequently talked with in natural settings, and though she was not fully a medicine person, her life experiences are quite valuable in understanding what it means to be a Diné person. The quality of the book makes her story the most moving of all the autobiographies. Her story is invaluable as reference as I attempt to come up with new ways to develop to mitigate and adapt to with climate change.

*How is the Navajo Nation going to mitigate and adapt to changes to the climate using Western knowledge?*

According to a United Nations University (UNU), United Nations Education, Science, and Culture Organization (UNESCO) report, *Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation* (2012), Indigenous peoples' knowledges are "an invaluable basis for developing adaptation and natural resource management strategies in response to environmental and other forms of change."<sup>68</sup> This report reached its findings from utilizing the comprehensive assessment reports of the earth's climate of the Intergovernmental Panel on Climate Change (IPCC). The IPCC "reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change."<sup>69</sup> The IPCC has three working groups (WGI, WGII, and WGIII) that focus on the 'The Physical Science Basis of Climate Change'; 'Climate Change Impacts, Adaptation and

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<sup>67</sup> Mitchell and Alexander Street Press, *Tall Woman The Life Story of Rose Mitchell, a Navajo Woman, C. 1874-1977*, 293–305.

<sup>68</sup> Nakashima et al., *Weathering Uncertainty*, 24.

<sup>69</sup> "IPCC - Intergovernmental Panel on Climate Change," accessed March 24, 2014, <http://www.ipcc.ch/organization/organization.shtml>.

Vulnerability’; and the ‘Mitigation of Climate Change’, respectively<sup>70</sup>. Lastly, there is a synthesis report of all three working groups that is definitive of the state of the global climate. There have been four assessment reports (AR) created since 1988 and the 2007 report won a Nobel Peace Prize.<sup>71</sup> These reports are the foundational western science perspective on climate change.

A new report, *Considerations for Climate Change and Variability Adaptation on the Navajo Nation* (2014) uses the latest 2013 hard-science focused WGI, IPCC report as a foundation and framework.<sup>72</sup> This non-Navajo authored report is an original and specialized Western climate science foundation for the Navajo Nation to “consider” how climate change will affect the Diné people. Other than a miscolored Diné medicine wheel graphic, the article does not include Indigenous knowledge (Diné worldview) into the methodology. This report is a climate sustainability report that assesses the strength and vulnerabilities the Navajo Nation has in dealing with climate change.

What is missing from the *Considerations for Climate Change* report is a section that examines how the Navajo Nation can use its Indigenous knowledge to help assess how the Navajo Nation is going to adapt to climate change. The *Weathering Uncertainty* report states plainly that the goal of the report aims for “[c]ollaboration between indigenous knowledge holders and mainstream scientific research [in order to create] *new*

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<sup>70</sup> Ibid.

<sup>71</sup> “IPCC - Intergovernmental Panel on Climate Change,” accessed March 24, 2014, [http://www.ipcc.ch/organization/organization\\_history.shtml](http://www.ipcc.ch/organization/organization_history.shtml).

<sup>72</sup> Nania, J., Cozzetto, K., Eitner, M. (2014). Chapter 1 – Overview and Context. In *Considerations for Climate Change and Variability Adaptation on the Navajo Nation*, edited by J. Nania\_ and K. Cozzetto. University of Colorado, Boulder, CO.

*co-produced* knowledge relevant for effective adaptation action on the ground.”<sup>73</sup>

Considerations for Climate Change is unique in that it might be the only expansive American Indian Nation focused climate change impact assessment report, but it needed to have the Diné Indigenous knowledge central to the report’s framework and analysis.

*Considerations for Climate Change* is an extension *Climate Change Impacts on the Water Resources of American Indians and Alaska Natives in the U.S.* (2013).<sup>74</sup> The principal author of this study, Cozzetto, is the same as the *Considerations of Climate Change*. Diné hydrologist, Karletta Chief, authored the second section of the study. This study examines how American Indians are going to be affected by climate change, but the scope of the research is limited to a Western scientific point of view. The study does make an attempt of adding an the Indigenous point of view and could being by using a correctly colored, medicine wheel and a four directions model to conceptualize a framework on determining how climate change is affecting American Indians and Alaskan Natives.<sup>75</sup>

Indigenous knowledge is valued by climate science policy experts for its strategic value and what an emerging Indigenous nation-state the Navajo Nation needs is a definitive implementation of Indigenous-Navajo methodologically-based study on how the effects of climate change might be on not only the Diné people, but also the wider spiritual relatives of the Diné; like the plants and animals.

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<sup>73</sup> Nakashima et al., *Weathering Uncertainty*, 10, emphasis mine.

<sup>74</sup> Cozzetto et al., “Climate Change Impacts on the Water Resources of American Indians and Alaska Natives in the U.S.”

<sup>75</sup> Ibid.

*How can Diné research methodologies help inform policies that will mitigate and adapt to climate change?*

Oscar Kawagley's book, *A Yupiaq World View: A Pathway to Ecology and Spirit* (1995), is an example of how an Indigenous thinker is able to clarify the relationship between oral histories and scientific thought.<sup>76</sup> There is no Diné equivalent to Kawagley's book, but in *Wolfkiller: Wisdom from a Nineteenth-Century Navajo Shepherd* (2007), there is an explanation of Wolfkiller's plant knowledge. Wolfkiller is taught oral stories that correlate to the available use of a plant. When *Wolfkiller* is critically analyzed using Kawagley's method, a foundation for a Navajo science methodology can be extracted from oral histories.<sup>77</sup> At this time of the authoring, it is past about winter stories, but in *Wolfkiller*, an example of a unique Diné method that can be explicitly documented and possibly replicated. This can be achieved by teaching the oral histories of then teach the properties of the plant and its uses. The important thing would be the student learning, in Diné, the story of the plant.

The Maryboy and Begay's paradigm, from *Living the Order*, illustrates a Diné paradigm model and combined with Hebert Benally's analytical framework, *Hozhoogo Naashaa Doo: Toward a Construct of Balance in Navajo Cosmology* (2008), (like how I am doing in this thesis), a strong foundation for a Diné research methodology precipitates. This new research methodology synthesized with Kawagley and documented Diné science method found in *Wolfkiller* is part of the core the Navajo Nation can use to

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<sup>76</sup> A. Oscar Kawagley, *A Yupiaq Worldview: A Pathway to Ecology and Spirit* (Waveland Press, Inc, 1995), 126.

<sup>77</sup> Wolfkiller, Louisa Wade Wetherill, and Harvey Leake, *Wolfkiller: Wisdom from a Nineteenth-Century Navajo Shepherd* (Salt Lake City: Gibbs Smith, 2007), 137.

create innovative Indigenous Diné-centered science curriculums. There are indigenous education scholars that have started to develop theories on how to build such education models.

Santa Clara Pueblo scholar Gregory Cajete's book, *Igniting the Sparkle: An Indigenous Science Education Model* (1999), does offer a general framework to develop a new Indigenous cultural relevant curriculum education model.<sup>78</sup> This model views Native American science education as a cultural process that that generally characterized as based by "observation, assimilation and experiential learning rather than by the low-contexted formal instruction characteristic of Euro-American schooling."<sup>79</sup> This strong statement is a good extension of Vine Deloria's suggestion that:

Indians now studying Western science would do well to talk with their elders and traditional people and learn to critique the cherished doctrines that their professors and institutions now promulgate. Scholarly papers and dissertations based wholly on the knowledge of the tribe could well hasten the day when our species could deal intelligently with the world...<sup>80</sup>

This quote was originally published in 1992, and is completely relevant to the idea that in order for the Navajo Nation to develop intelligent ideas to start to heal climate change: the Navajo Nation has to start with respecting knowledge of the elders; be open and critical about the warnings of a changing world foretold by the elders; and start the sacred duty of developing policy that protects the coming generations from potential harm

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<sup>78</sup> Gregory Cajete, *Igniting the Sparkle: An Indigenous Science Education Model*, 1st edition (Skyand, NC: Kivaki Pr, 1999), 8.

<sup>79</sup> *Ibid.*, 26–27.

<sup>80</sup> Vine Deloria Jr., *Spirit and Reason: The Vine Deloria Jr. Reader*, ed. Samuel Scinta, Kristen Foehner, and Barbara Deloria (Golden, Colo: Fulcrum Publishing, 1999), 71.

caused from climate change. The current Navajo Nation’s science policy tries to seek this type of innovation.

The only advanced science research body associated with Diné government is the Diné Environmental Institute (DEI), which is housed within Diné College, the Navajo Nation’s two-year college.<sup>81</sup> The vague mission of the DEI is to “to meet the documented environmental needs of the Southwest region of the United States and of the Native Nations.”<sup>82</sup> Amazingly, this institute “is based on Sa’ah Naaghái Bik’eh Hózhóón (SNBH) the Diné traditional living system which places human life in harmony with the natural world and the universe.”<sup>83</sup> By looking through the website it seems that this program has not been well funded because there are no recent research initiatives publicized. It is good that there is a Diné thought based science institute; because science focused Indigenous climate change policy will be the next great policy frontier.

By reviewing all of the aforementioned work and marrying with a synthesized Maryboy, Begay and Benally process model, an exciting foundation for a Diné science methodology emerges. This Indigenous methodology, birthed from theoretical intellectual discourse, would put the Navajo Nation at the forefront of the new transdisciplinary science research sought by climate scientists that exposit unique Diné

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<sup>81</sup> “Diné Environmental Institute - Institutes & Programs - Diné College,” accessed April 8, 2015, <http://www.dinecollege.edu/institutes/dei.php>.

<sup>82</sup> Ibid.

<sup>83</sup> Ibid.

“...adaptation and natural resource management strategies...” for use as partners in developing new climate change mitigation and adaptation models.<sup>84</sup>

*What type of actions and frameworks can the Navajo Nation use to generate meaningful policy?*

*Weathering Uncertainty* and the IPCC assessment reports are major pieces that provide evidence to drive the positivist frameworks that could influence legislation that could mitigate climate change on behalf of the world peoples.<sup>85</sup> Diné legal scholar Rebecca Tsosie, in her law article entitled *Indigenous People and Environmental Justice: The Impact of Climate Change* (2007), soberly critiques the positivist strategies utilized by *Weathering Uncertainty* and the IPCC’s assessment reports. The following is from her abstract and it fairly describes the position of her article:

[B]y tak[ing] the position that the [IPCC] adaptation strategy will prove genocidal for many groups of indigenous people [because some adaptation strategies call for removal], and instead argues for recognition of an indigenous right to environmental self-determination, which would allow indigenous peoples to maintain their cultural and political status upon their traditional lands. In the context of climate change policy, such a right would impose affirmative requirements on nation-states to engage in a mitigation strategy in order to avoid catastrophic harm to indigenous peoples.<sup>86</sup>

The Navajo Nation cannot blindly trust documents such as *Considerations for Climate Change* as the ultimate policy guides because the nature of Western science is to be objective and the future decisions the Navajo Nation will have to make will require them

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<sup>84</sup> Nakashima et al., *Weathering Uncertainty*, 24.

<sup>85</sup> Nakashima et al., *Weathering Uncertainty*; Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.), “IPCC, 2013: Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.*”

<sup>86</sup> Rebecca Tsosie, “Indigenous People and Environmental Justice: The Impact of Climate change.(The Climate of Environmental Justice: Taking Stock),” *University of Colorado Law Review* 78, no. 4 (2007): 1625.



to consider all aspects of Diné civilization including ideas like spirituality. The key is that reports like *Consideration for Climate Change* and *Weathering Uncertainty* have to be supplemental to the guidance contained in the Diné philosophy of SNBH and the Diné Fundamental Laws.<sup>87</sup>

The Navajo guiding documents for future political action involving mitigating and adapting to climate change are the Fundamental Laws of the Diné.<sup>88</sup> Specifically, stated in Title 1 section 205 of the Navajo Nation Code of laws (1 N.N.C. § 205) are the Nahadzáán dóó Yáidilhił Bitsaadee Beenahaz'áanii. These laws are derived from Mother Earth and Father Sky and one law states “It is the duty and responsibility of the Diné to protect and preserve the beauty of the natural world for future generations.”<sup>89</sup> This statement is explicit to any reader about the duty the Diné people have to respecting the environment. The beautiful thing is that Diné College has started building the foundations of this process with the Diné Policy Institute.

The Navajo Nation has to create a Dine-centered, Indigenous research project that comprehensively reviews of all climate science, emphasizing on the affects its lands as well as the holistic interests of the Diné people.<sup>90</sup> From this position of authority and sovereignty, the Navajo Nation can then create Navajo Indigenous-based strategies to protect the future people by drawing from their own findings. The Navajo Nation has

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<sup>87</sup> Lee, *Diné Perspectives*; “THE FUNDAMENTAL LAWS OF THE DINÉ,” accessed November 20, 2013, <http://www.navajocourts.org/dine.htm>.

<sup>88</sup> “THE FUNDAMENTAL LAWS OF THE DINÉ.”

<sup>89</sup> Ibid.

<sup>90</sup> Smith, *Decolonizing Methodologies*, 225.

already proven to have the capacity to generate solid policy guidelines to science policy questions. For example, Diné scholar Andrew Curley's Diné Policy Institute (DPI) sponsored paper, *Dóó nal yea dah: Considering the Logic of the Diné Natural Resource Protection Act of 2005 and the Desert Rock Power Plant Project* (2008), has achieved this in analyzing uranium and coal mining from a Diné perspective.<sup>91</sup> More recently in 2014, DPI has generated a report concerning the food sovereignty of the Navajo Nation. This study, *Diné Food Sovereignty: A Report on the Navajo Nation Food System and the Case to Rebuild a Self-Sufficient Food System for the Diné People*, uses the Fundamental Laws of the Diné to understand the origins and current state of the Diné food system.<sup>92</sup> These two documents showcase the ability for the Navajo Nation to create innovative research and it would be not be difficult for the Navajo Nation have climate change focused policy paper(s).

## **Summary**

The first research question, which asked how the Diné viewed climate change, was addressed through an in-depth review of the Dine oral record of climate change. I found that, from the Dine perspective, a changing climate marks the end of the world, and some medicine people say that the Diné will not all die, but those who “prepare” themselves will survive the “changeover”.<sup>93</sup> The second question, which asked for an

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<sup>91</sup> Andrew Curley, “Dóó Nal Yea Dah: Considering the Logic of the Diné Natural Resource Protection Act of 2005 and the Desert Rock Power Plant Project” (Diné Policy Institute, February 2008), <http://www.dinecollege.edu/institutes/DPI/Docs/DNRPA%20and%20Desert%20RockII.pdf>.

<sup>92</sup> Diné Policy Institute, *Diné Food Sovereignty: A Report on the Navajo Nation Food System and the Case to Rebuild a Self-Sufficient Food System for the Diné People*. (Tsaile, Ariz.: Diné College, April 2014), 8, <http://www.dinecollege.edu/institutes/DPI/Docs/dpi-food-sovereignty-report.pdf>.

examination of how the Navajo Nation could use Western science to mitigate and/or adapt to climate change, was also addressed through a Diné lens. Upon review, I found that the IPCC reports and the United Nations University efforts were used by and, for the most part, affirmed by the Navajo Nation, which will inevitably follow the recommendations outlined by the *Considerations of Climate Change* report published by the University of Colorado group. The third question addresses how Diné research methodologies can help Navajo conceptualize climate change to directly confront this challenge. Here a review of foundational Indigenous science texts were analyzed and compared to the developing and newly realized Diné-focused research methods. Upon this analysis I presented a proposed intellectual foundation for a viable Diné science methodology. The fourth research question addressed the possible actions and can Navajo take through research and policy-making. The literature and records, upon review, have shown that the current way to frame climate change is by first moving away from the IPCC positivist methods, and then utilizing and relying upon the Diné Fundamental Laws in order to re-think policy initiatives involving climate change. Cited in this section, were two innovative intellectual works that incorporate and synthesize Diné thought, science, and public policy.

The critical analysis section will comprise of an analysis framework that utilizes Diné philosophy to analyze the effect climate change will have on Diné society.

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<sup>93</sup> Nickerson, *Walking Thunder*, 149; Holiday and McPherson, *A Navajo Legacy*, 285.

## Analysis

For analysis of the literature review, Diné oral narratives guide the focus of the section. Using oral narratives for analysis is decolonial Diné research.<sup>94</sup> Respectfully, this section engages the earth/sky (spirituality), water/sacred mountains (economic sustainability), air-variegated vegetation (family and community), fire/light and variegated sacred stones (home-place and environment) binaries as solid footing in contemplating how the NN will address global climate change.<sup>95</sup> This unconventional method is important because this is how Diné philosophy can be applied to an analysis framework to protect the Diné people from the dangerous effects of climate change.

### *East-Earth/Sky-Spirituality*

Benally writes that the dawn-east-thinking direction is the “spiritual wellness” of the people. The spirituality of the Diné is tied to health of their spiritual ceremonies. Frisbie in *Navajo Blessingway Singer* writes “...the essential spirit of the Navajos [is] contained in their ceremonies and especially the Blessingway. [Frank Mitchell] then predicted that when these were gone, then the Navajos would also be gone”<sup>96</sup> Knowing and performing Diné ceremonies prepares the Diné to deal with sudden societal change. Walking Thunder said that “those who made preparations will survive” and John Holiday said that the people who practiced ceremonies like the Blessingway would be spared

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<sup>94</sup> Kovach, *Indigenous Methodologies*, 103.

<sup>95</sup> “THE FUNDAMENTAL LAWS OF THE DINÉ”; Benally, “Hozhoogo Naashaa Doo,” vi.

<sup>96</sup> Mitchell, Frisbie, and McAllester, *Navajo Blessingway Singer*, 3.

from dying during the “changeover”.<sup>97</sup> Thus, the spiritual solution for the Navajo Nation to address climate change is that the fundamental ceremonies, especially the Blessingway, must continue to be performed.

Diné philosophy means to “strive to live a long and harmonious life” and as of today a lot of Diné people seem to have forgotten this essential teaching.<sup>98</sup> In order for the people to survive climate change, the Diné people have to remember the sacredness of Diné philosophy.<sup>99</sup> Influential non-Diné writers like Vine Deloria, Jr. and Taiaiake Alfred call for a “New Religion” and a peaceful “Spiritual Revolution” in order to transform our communities for the better.<sup>100</sup> By keeping our spirituality strong, the Navajo Nation will be able to think creatively to adapt to and help mitigate global climate change.

Hosteen Klah’s account of the intense spiritualism that accompanied the pilgrimage to the Shining Sands of Prophecy is how the Diné must conduct themselves when they want to become serious about protecting themselves from climate change.<sup>101</sup> The earth and sky show us how to ask the right questions.<sup>102</sup> After thinking about how

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<sup>97</sup> Nickerson, *Walking Thunder*, 150; Holiday and McPherson, *A Navajo Legacy*, 285.

<sup>98</sup> Lee, *Diné Perspectives*, 5–6.

<sup>99</sup> Holiday and McPherson, *A Navajo Legacy*, 288.

<sup>100</sup> Vine Deloria Jr., *We Talk You Listen* (Delacorte Pr, 1972), 17; Gerald R Alfred, *Wasa'se: Indigenous Pathways of Action and Freedom* (Peterborough, Ont.; Orchard Park, N.Y.: Broadview Press, 2005), 27.

<sup>101</sup> Newcomb, *Hosteen Klah*, 27–28.

<sup>102</sup> Gregory Cajete, *Look to the Mountain: An Ecology of Indigenous Education* (Durango, Colo.: Kivaki Press, 1994), 42; 70.

spiritual revitalization will keep Diné people protected from the worst of climate change, we have now have understand how to plan to achieve it.

### *South-Water/Sacred Mountains-Economic Development*

According to Maryboy, Begay and Benally, “Planning for Livelihood” is how the southern directional method of analysis should be interpreted. Frank Mitchell conveys knowledge about the dynamic change that is already inherent in life:

In the early days, the old people were our teachers. They said as long as we observed the rules laid down for us by the Holy People, everything was going to go along smoothly. But, they said, it would not last forever. Sooner or later we were going to start breaking rules. Then that would lead us to ruin. it is like a seed of any kind, like corn, or beans or anything that you put in the ground. You plant it, and it sprouts and bears fruit and grows to a certain extent. When it matures, you harvest what it has produced; the stalks and leaves wither because their use is past. But you still have the seeds to continue planting and arriving at a new life. That is what the older people taught us. If you do not observe these things, you are bound to ruin yourself.<sup>103</sup>

This passage speaks directly to how societies are bound to expand and constrict, regardless of how reverent they are of existence. Mitchell uses the corn stalk as an analogy to illustrate his point. He explains that the natural order of life requires Peoples to plan for both the expansion and constriction. This means that being aware of the cyclical nature of societies makes the people better able to deal with change when it happens. Walking Thunder asserts a similar concept when she talks about the “circle of life” and that “the world will not end”, but only “change”.<sup>104</sup> Both haataliis show that

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<sup>103</sup> Mitchell, Frisbie, and McAllester, *Navajo Blessingway Singer*, 311.

<sup>104</sup> Nickerson, *Walking Thunder*, 149.

knowledge of the change allows people to have the capacity to start planning for the inevitable change.

The climate change dilemma is not a natural dilemma, because the activities of modern humans are the cause of it.<sup>105</sup> The “change” Mitchell and Walking Thunder are talking about are natural shifts extending back into the primordial times. However, a foundational Dine paradigm reveals how people have dealt with a changing society in the past. Frank Mitchell is confident in the younger generation and the future and expresses this paradigm:

I think about the future; of course, I may never get to see it, but I just wonder how things will be in so many years, what improvements there will be for the benefit of the People... [W]e have schools and law and order for the benefit of the People. But still we have disobedience from our young people. Looking at those things, it's very hard to figure out what the future will be and what the People should do for a better life. I think about that often. It puzzles me because if we continue to carry on the way we are now, there will be no great hope for the future. We will simply come to a stone wall where it all will stop unless the People start planning ahead.<sup>106</sup>

Mitchell's focus on “planning” is most important from the quote because the only way for the Diné to continue as distinct people is to plan for the eventual coming change. His assertion in the first quote about the cyclical nature of societies and that the planning process, emphasizes that having the intuition to save the seeds for the future is integral to living the planning paradigm of Diné philosophy.

Mitchell also revealed the following about the sustainability of professions:

[Y]ou [can] perform ceremonies [until] the end of your days. Any of the other ways by which you can seek a living, such as farming, raising stock and things

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<sup>105</sup> Wildcat, *Red Alert!*, 6–7.

<sup>106</sup> Mitchell, Frisbie, and McAllester, *Navajo Blessingway Singer*, 311.

like that, all have an end. But the [people] who learn to perform ceremonies... make a living...until the time they pass away. ...[E]ven if you get old, even if you get blind and deaf, you'll still remember everything by heart, how each part of the ceremony is performed.. Even though you are so old you can't ride a horse...people will still have a use for you until old age finishes you off<sup>107</sup>

This synthesized passage explains the subtle way that the NN can start asserting control over its development as a nation. Mitchell writes that saving seeds (e.g. agriculture, economies) to get through the times where plants wither and die is an ancient teaching that probably includes all peoples of the world. Mitchell reveals that ceremonial knowledge fulfills a need of the people that makes it sustainable until very close to the moment of their death.

Prominent Mohawk scholar, Taiaiake Alfred, who has developed original and innovative work that challenges Indigenous peoples to peacefully liberate themselves from being dependent on white people to survive, writes this of economic development:

I [am] convinced...that economic power is the foundation of independence. But I was also more keenly aware that maintaining our connection to our cultural roots is the only thing that ensures we remain Onkwehonwe [Mohawk]. We need to possess both economic power and cultural authenticity.<sup>108</sup>

Alfred then asks: how can “money” be combined with traditional Indigenous thought in order to reconcile the ideology that modern and traditional in order to create self-sufficient Indigenous communities?<sup>109</sup> Mitchell and Alfred-combined-talk of an economic system that honors the essential spirit of the people. According to these philosophies, nearly all of the livelihoods that exist, that is ways of living, including a lot

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<sup>107</sup> Ibid., 312; 193–194.

<sup>108</sup> Alfred, *Wasa'se*, 222.

<sup>109</sup> Ibid., 223.



of modern professions, are temporary. Meanwhile the ceremonies of the people create the most security in life because for a community to feel secure, the sacred knowledge of the unknown, needs to be framed in human terms. Medicine people and abstract thinkers, like scientists, will always have a means of survival so long as humans exist. Global climate change makes this economic security idea, a valuable piece of knowledge to have.

Planning for the ability to live forever requires the Diné to keep alive their ceremonies, because these ceremonies contain the seed of personal and tribal economic security. This economic design was planned to be able to transcend catastrophic shocks to human community. The very idea that Diné people survived its horrific history is evidence of the power of this planned economic design. With this knowledge the Navajo Nation can develop audacious, innovative plans that combine current “money” ideas and merge them with Diné philosophy in order to make quantum leaps in pushing the Diné people towards self-sufficiency. The key to such grand ideas is to have strong communities be the driving force for change. And strong communities are developed through strong families. The next section sketches how both families and communities can be designed to be strong.

#### *West-Air/Variiegated Plants-Family and Community*

Rose Mitchell had an autobiographical book of her own, *Tall Woman The Life Story of Rose Mitchell, A Navajo Woman* (2001). The following excerpt is perfect for understanding part of the ontology of Diné family and community life:

Another thing [the children (i.e. the coming generations)] need to be taught is to be a good person, one who lives in the right way. There's lots of things that go into that. Maybe you can't teach all of it to your children; I don't know. Frank

used to preach about it here at home and also at gatherings, when he was talking to the People. I think some of it you can talk about. But with other parts, you just have to use your own head, think about it as you get older, and figure out what you're going to do about different things that come along. Frank and I wanted our children to turn out right; we wanted them to be people who lived in a good way, not people who were known for causing trouble, fighting, running wild, or talking in harmful ways against others. We used to correct them if they said mean things to each other, or about someone who was here; we'd say, 'Don't talk like that, don't say those things.'

...Part of it is your words, how you speak to others. But there's more to it. You need to be friendly to people; you need to try and help others. Even if you have only a little food or coffee, you need to share what you have, and try to help others whenever they need your help. You need to show you're like that not only with your relatives, but even with outsiders. Frank always said that; even if you don't have any money or any sheep you can butcher, there's always something you can share, something you can help with. Sometimes, just taking time to sit and listen to someone's troubles helps; it gives them encouragement; sometimes all a person needs is advice. We both tried to be that way and live like that, being nice to everybody, and sharing and helping in whatever ways we could. And we wanted our children to act like that, too.

The reason that's important is that it comes back to you. Everyone goes through sufferings as they go along; you never know what's going to come up, or what hardships you'll have to face. You don't know what's ahead; you have to be prepared for everything because you *will* have hard times, difficulties with your children, yourself, your spouse, your relatives. Whatever comes along, you have to be ready to face it and take it in stride. Even if things go smoothly for a long time, sooner or later, something will come up. When you're young you think you'll always be that way, strong and healthy. You forget that old age is waiting for you, if you're lucky enough to live that long and get up in your years. Then you'll have aches and pains, you'll start slowing down and need help with things; maybe you'll even get some serious illness. Right there, if not earlier, how you've been treating other people comes back on you.

...Both Frank and I knew those things were very, very true and that they were very important. And the way we felt about it, it wasn't just your relatives who should be helped; you should be that way with everyone who came along into your life for whatever reason, if they were good people, themselves. If you are known for your friendliness and kindness, your helpfulness and thoughtfulness, all of that will come back to you tenfold. When you get sick or face other hardships and sufferings, people will help you. But if you haven't helped your relatives, your neighbors and friends, visitors who come around, and others, if

you've been stingy and haven't shared whatever you could, then that's what will happen to you, too.<sup>110</sup>

Upon and while reading this passage, the reader must understand the holistic nature of tribal communities and that it makes family and community the center of life as a driving force that people use to realize and live their peoples' life philosophy (i.e. SNBH).<sup>111</sup> What is presented in the passage is the literal manifestation of the "technology" that creates an ecological community-consciousness.<sup>112</sup> From a simple Western science perspective, Tall Woman's words reveal that living in good manner creates a fundamental life element of positive feedback, which continues, in an endless loop.<sup>113</sup> To better explain Tall Woman asserts: in order to live in a manner that increases the maximum life potential, a person should live as described by Tall Woman.

#### *North-Fire/Light-Home and Environment*

Maryboy and Begay write that the north section might be defined as "a self-evaluation process leading to assurance and security." Combined with Benally's framework what happens is that the Diné people have to be assured that they are safe from the dangers of life. This snippet of the Diné philosophy is hard to understand divorced from all other elements of the philosophy, but in terms of "home-environment" context we have to see that the ultimate security that is affecting the wider "environment"

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<sup>110</sup> Mitchell and Alexander Street Press, *Tall Woman The Life Story of Rose Mitchell, a Navajo Woman, C. 1874-1977*, 300–302.

<sup>111</sup> Deloria, *We Talk You Listen*, 12; Cajete, *Look to the Mountain*, 180.

<sup>112</sup> Deloria, *Spirit and Reason*, 136; Cajete, *Native Science*, 95.

<sup>113</sup> Maryboy and Begay, "Living the Order," 475.

will affect the home. This is because the traditional Diné home, hooghan, extends out to the “environment”.<sup>114</sup> Because the hooghan is round, the combined elements of life and community are all found within the home and makes the home central to Diné spirituality.<sup>115</sup> The earth, the air, the water, and the fire all are used to create a secure home. The thinking, planning, living and assurance of security all are found in the cardinal directions of the home. The north direction synthesizes all the sacred elements so the Diné people are *rest assured* that life will continue.

In terms of climate change, the Diné people have the knowledge to know that the climate has changed, and that the climate has naturally waxed and waned. Armed with this knowledge the Diné must plan accordingly to meet this great challenge head on by ethically developing their national level self-sufficiency. By living in respectful manner the Diné can live a human life to its fullest degree. Diné society can then be assured that whatever eventual consequence of climate change may happen, the Diné can trust in knowing they have the ability to live through a changed climate. With these understandings we have to acknowledge that our lives are fragile in the face of global climate change and the only way that we can live happily is to remember the stories of the ancestors and be good to one another.

## **Findings**

1. The finding of the East-Earth/Sky-Spirituality section is that the essential spirit of the Diné is found in their ceremonies. These ceremonies have to remain alive,

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<sup>114</sup> Austin, *Navajo Courts and Navajo Common Law*, 76.

<sup>115</sup> *Ibid.*, 75.

- participants have to remain active, and the people must continue to hold them with regard in order for the NN to have a legitimate process model to mitigate and/or adapt to the approaching drastic social change caused by climate change.
2. The South-Water/Sacred Mountain-Economic Development section revealed that economic security is not found solely in resource development, but in the security of ceremonial knowledge. Inside this knowledge is a way for a human being to contribute to society even if he or she becomes blind and/or deaf. The burden however, is not to promote labor, but the ability for people to live into old age. This section describes a guiding principle for how the Navajo Nation should choose to develop its economy.
  3. The West-Air/Variiegated Plants-Family and Community section revealed a finding that community and family are the driving force of what drives the Diné philosophy of SNBH. In order for the Navajo Nation to deal with climate change, Diné families and communities must remember how to treat each other with respect. The collective survival of the Navajo Nation always depended on this teaching.
  4. The major findings of the North-Fire/Light-Home and Environment section is that we, as Dine or as human, have to acknowledge that our lives are fragile in the face of global climate change, and that the only way that we can live happily is to trust the power of the stories of the ancestors, and also seek to embody the Diné philosophy of SNBH.

## CHAPTER 4-SIIHASIN-DISCUSSION

### **Introduction**

This section is about Siihasin, which is defined as the assurance that comes from security, through self-evaluation, that an initiative was correctly executed.<sup>116</sup> This concept is like the nighttime in the unfolding day, and this section represents the unfolding of this study. Chapter 1 set the stage with the current state of climate science and how the Diné have to begin to think differently if they want to understand climate science. Chapter 2 built up the idea of a Diné research methodology and Chapter 3 reviewed and analyzed the research questions that tried to reconcile how the Navajo Nation is going to mitigate and/or adapt to Global Climate Change. This chapter evaluates the strengths, weaknesses of chapters 2 and 3 and also discusses potential future research.

### **Discussion**

The methodology section discussed earlier did not include how personal experience is also part of the process when implementing a Diné research methodology. But, in the process I learned as a Dine researcher, that even when I thought I was being an objective academic, I was still enduring what I have been identifying as a unique Dine-centric research method. I realized that this methodology has been guiding me through out my entire life. My parents, siblings, grandparents, my home community, and the Diné people all are manifestations of this process. My worldview even incorporates the stark language of the “Scientific Method”. But, I realized I could have done more to

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<sup>116</sup> Maryboy and Begay, “Living the Order,” 338–339.

honor this methodology because it is more than just a process, it is the way of life that is fundamental to being Diné.

My level of discipline in both research and living needs work. I looked to my grandfathers and grandmothers for understanding about what is discipline. In the past I would become envious of people who were disciplined. Now, I give thanks for their strength for being good people. Those people are my role models, and I will thank them when I see them. This Diné research method must start with prayer. I now realize that I will need to let the distractions of life go, and live this method in order for my academic career blossom to its full potential. This is a deeply personal process, but it enters the work, which might have influence on young minds in the future, so it is very important.

This methodology is partly learned by doing. My appreciation for how unique an Indigenous worldview really is, is growing. I am in awe of the scholars who started the academic work of expressing Diné thought without other scholars to help guide them. I am forever thankful for the elders that had the forethought to allow their stories to be recorded. I am the ancestors' prayers, and I am happily assured that this idea is true. My understanding of this method is tied to time and space. The more I delve into these other dimensions, the deeper my understanding of the method will become.

The literature review and analysis chapter was a complex knot to untie. I am confident that I found the relevant foundational texts for each of the research questions, and that I am performing helpful work to future scholars by identifying the Diné autobiographies. I know I could have expanded on the climate science sections, but I feel that work will be done in the future. I needed to focus on the Diné thought first. I feel I

am creating a *quality* research product by grounding my inquiries deeply with Diné narratives. The analysis portion was quite inspiring to do. I feel that using Benally's framework helped focus my work. Without his framework, I believe this paper would have expanded into bloated chaos. Yet, I see there is room to expand the analysis into deeper dimensions of Diné thought. What I found to be comforting and profound is how I fulfilled one personal goal for this study: To comfort the intense fear and despair I felt when I thought deeply about the consequences of climate change. When I first started thinking about this idea to examine Dine thought as it applies to climate change, I had just completed a Climate Science for Sustainability class. This course reviewed the current state of the Earth's climate, and some of the findings led to my sincere concern for the Diné people. One day while researching for this class I envisioned the future if some of the scenarios of a runaway greenhouse effect became reality. I saw extreme hardship for the Dine people and this shook me. I believe that this study has already given protection to the people simply by its creation. Just as Benally says that his dissertation is based from protection prayers, I believe that so is this thesis. Since completing it, I am now able to think about the future with strength and hope. I definitely plan on conducting future research and work in this area and believe that I will also rely on other decolonizing research projects from Linda Smith's book, like "envisioning", to further develop and solidify proper methods so the Diné people can mitigate Global Climate Change.<sup>117</sup>

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<sup>117</sup> Smith, *Decolonizing Methodologies*, 153.



## **Conclusion**

In total this study takes numerous leaps of faith by purporting to be an exercise in a Diné research methodology. I have tried to utilize my Diné language in thinking about some of these concepts. While reading the autobiographies, I would try to translate the English into Diné. I did my best to think Diné and any mistakes and inconsistencies are my responsibility to correct.

## Ending

*We owe our ancestors the greatest thanks for their love. We exist because through their love they planned for us to be. We have to fight to always live as Diné people. The world has changed just as they knew it would. We have to plan ahead and live as relatives once again. Even though we are still hurting, we have to live in goodness and beauty because that is the only logical way to live.*

*From earth-mom, sky-father, all the living beings, all the mountains, all the colors of those mountains, all the beings associated with those mountains, below and above;  
We will embody the ability to live unto old age in beauty.*

*In beauty it will become  
In beauty it will become  
In beauty it will become  
Beautiful, it has become.*

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APPENDIX A

LIST OF CURRENTLY KNOWN NAVAJO AUTOBIOGRAPHIES



◆ = Medicine People

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