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At a Social Crossroads: Navajo Healing and Western Biomedicine

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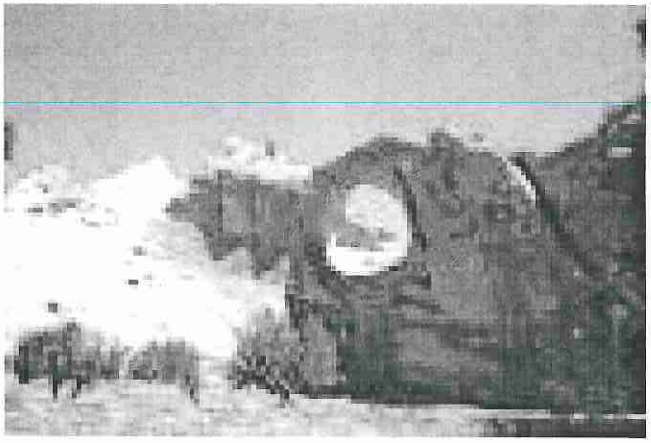
At a Social Crossroads: Navajo Healing and Western Biomedicine



Rogette Esteve

Honors Thesis

Advisors: Dr. Janet Monge, Dr. Fran Barg

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Abstract

This thesis elucidates the diversity of Navajo healing models and the relationship these models have with Western Biomedicine. Through a myriad of different techniques, such as a review of applicable theoretical models, interviews, and questionnaires, I examine how these Navajo healing models and Western biomedicine as its own model *informs* the various conceptions of health by Navajos living in an urban setting (~76,00 Native Americans live in the metro Phoenix area, 70% of whom are Navajo). Through research conducted both in Philadelphia, over the phone, and in Phoenix Arizona, I was able to find that not only are healing models are culturally informed, but also, social infrastructures contribute to people's understanding of the world around them. We must not take the influence of these social infrastructures for granted, for all too often they will play a major role in how patients perceive their healing experience to be, and might very well play a role in the *outcome* of their healing experience, for better or worse (refer to Appendix D for interviews shedding more light on this particular phenomenon). We as members of the academia and health care professionals, must be more focused on the types of underlying social mechanisms found in institutional settings that will impact someone's perception of what health entails.

Introduction to the Usefulness of Health Models

Models are an important means of making sense of the world around us—or helping us *change* aspects of the world through the prism in which *we* see it. People frequently use models not only to cognize the world, but also to build upon other concepts and to add their own perspectives to these models. The term "model" has several connotations, but for all practical purposes, we shall settle on one that will

hopefully tie in the major points featured in this paper. Cognitive anthropologists D'Andrade and Strauss define *cultural models* as culturally formed cognitive schemas (D'Andrade & Strauss 3). What then is a schema? A schema may be defined as a "conceptual structure which makes possible the identification of objects and events" (D'Andrade & Strauss 28). Schemas themselves can be broken down into their constituent properties, but at the cost of veering away from the current task at hand, which will be using cognitive anthropology theory and methods in investigating the social crossroads of Navajo healing models and western biomedical models. Models can be grossly oversimplified ways of holding various ideas together, or can be frustratingly beautiful in the ways that they challenge the morality and sensibilities of the parties being "represented" in a particular model. Yet how may one apply these ideas to an overarching question of healing models as they relate to social infrastructures? One thing is for certain is that cognitive anthropology has much to contribute to an analytical study of the nexus between Navajo healing and Western biomedicine and the social infrastructures linking both.

Since the beginning of time, humans have been interacting with different cultures and have extracted what they believe to be appropriate and beneficial into their culture. A model is a lens through which a particular society can convey its morality and sensibilities. It is the glue that holds various ideas together. Not all of the ideas and concepts presented in a model will agree, but a model is a unifying theme that draws even opposing idiosyncrasies together. When applied to health, models can prove to be a fruitful ways of making sense of a myriad of healing elements that otherwise do not appear to share anything in common at all. Models serve a purpose that is not altogether

made apparent while discussing the various *schemas* within a model. With a clear idea of what cultural health models can be ascribed to within a particular society, one can then begin to make accurate inferences as to what these models may mean to the members of this society. Meaning is felt-experience toward a particular object, concept, or moment in time. Every individual's meaning is different when it comes to models, but the perspectives that go into these models are culturally-informed, and this is where cognitive anthropology can go the distance in helping to analyze how people (in this case Navajos) think about these models. This research thesis will seek to incorporate the concepts identified above, review existing literature pertinent to the thesis, while hopefully shedding more light on the diversity of Navajo healing models.

First, definitions are in order to provide a foundation to this thesis. D'Andrade states that "Cognitive anthropology is the study of the relation between human society and human thought...(it is a study of) how people in social groups conceive of and think about the objects and events which make up their world" (D'Andrade 1). This definition of cognitive anthropology feeds well into the thesis aspect of the research (thesis) I will ultimately conduct. It is not a common occurrence for people to think about health models since there is everyday life to think about. Still, people will both subconsciously and consciously think about their health through the models embedded in their minds. In addition to what has been stated above, this thesis serves the purpose of illuminating the different types of models and examining their relationship with the social infrastructures that help formulate them today. Indeed, social infrastructures have much to do with the culture of that infrastructure. It would be helpful here to have a working definition of culture and to see what sort of elements from this definition can be used in our look at

cultural health models. Anthropologist Alessandro Duranti sums a very popular notion of culture in the following definition of culture: "Culture is that of something learned, transmitted, passed down from one generation to the next, through human actions, often in the form of face-to-face interaction, and, of course, through linguistic communication" (Duranti 23). Claudia Strauss's fax model of culture is a good starting point to investigating cultural health models. The fax model descries how culture is transmitted to people, and how they in turn transmit this culture to their children (De Munck 9). It can be seen, however, that the recipient of that knowledge does not always interpret what they see in exactly the same way as their predecessors. Still, Strauss believes that culture "includes both the public actions, objects and symbols that make shared learning possible and the private psychological states of knowledge and feeling without which these pubic things are meaningless and could not be recreated" (D'Andrade & Strauss 6). It is these "private psychological states" that provide people a sense of individualism as they make informed decision about their environment...and their health. Again, health is a culturally-informed concept that is also subject to an individual's own ideas and conception of what health is. The methods section of this thesis paper will look at some of the ways cultural health models can be studied with their accompanying social infrastructure. But first, an overview is needed of some of the existing models as they pertain to Navajo health.

Overview of Various Navajo Healing Models

Upon an initial glance of the literature, it is deceptively easy to synthesize the Navajo healing experience into one holistic "Navajo healing model." However, it would be foolhardy to gloss over the heterogeneity of the models that comprise the Navajo

healing experience, which itself will differ from person to person. The phrase "Navajo Healing" as included in the title of this thesis is somewhat of a misnomer, for it does not do justice to the many levels that make up each unique healing experience. Yet, this all-encompassing phrase is a good launch pad for what will develop into well-studied ideas of cultural models as they are applied to the health experiences of Navajos, and how these experiences come to life by the social environment of these Navajos. Furthermore, this thesis is enriched by an inclusion of Western biomedicine as one of many outside influences that shape a particular Navajo's healing experience today. Appendix B provides a wonderful diagram of four types of models that are currently being used among some members of the Navajo community. The models originate from four key elements of the Navajo society: traditional Navajo healing, Navajo Christian Healing, Biomedical Healing, and the Navajo Native American Church Healing. Of course, other healing models may exist from other organic elements of the Navajo people, but these four categories of healing models are among the most well known and logical from etic and emic representations of Navajo healing. Thomas Csordas, a leading anthropological scholar, along with other contributors in a *Medical Anthropology Quarterly* volume dedicated to Navajo healing, suggest that the "four modes of healing…are the principal components of the (Navajo) 'health care system'…(and that this system) can be conceptualized with reference to the cardinal points by means of which Navajo thinking is oriented, and represented in contemporary Navajo style with east, the direction of the sunrise, at the top" (Csordas 464). Referring to Appendix B ("*Dine Bikeyah*" signifies Navajoland), this conceptualization is hardly off the mark in terms of how Navajo society incorporates their healing regimes into their social and natural environments. Of course,

this etic representation of the health care system may not be what Navajos have in mind, but it highlights a point that Navajo healing models can and do overlap.

Scholar Caitlin O'Neil has done extensive research on Navajo healing models. She has written on the *haatali,* the singer who is also known as the medicine man (they are seldom women), is called after a hand trembler, or *ndilniihii* (often a woman) makes her diagnosis (O'Neil 2003). O'Neil describes how there are nearly 100 Navajo chants all originating from the Creation Story of the Navajos: "Ceremonies last anywhere from one to nine days and include chants, songs, prayers, lectures, dances, sweat baths, prayer sticks, and sand paintings...The medicine man and his assistants are paid for their services with food, jewelry, rugs, blankets, baskets, livestock, or cash" (O'Neil 2003). Sand paintings are an important part of many sings, or ceremonies, to promote health. The paintings themselves, with over 500 kinds, are dry paintings, where such materials as ocher, charcoal, gypsum, cornmeal, powdered flower petals, and corn and other plant pollens are used. Referring to Appendix A located toward the end of this paper, the main symbols that appear in this sand painting include representations of the human heroes of the Navajo origin legend and the Holy People they encountered. After the sand painting is completed and the rites are administered for the person seeking the healing or blessing, the sand is swept away and "given back to Mother Earth from whence it came" (O'Neil 2003). A more detailed description of the sand paintings can be found in O'Neil's referenced article. The sand paintings confer both healing and blessings on the Navajo people, and are pivotal in Blessing Way ceremonies. These types of ceremonies are "kind of wish for good luck that gives *hozho* (harmony of the universe) to newborns, new homes, marriages. In contrast the Enemy Way chant exorcises the ghosts of aliens,

violence, and ugliness" (O'Neil 2003). This particular model of healing looks at healing from a holistic point of view. It takes a look at the artistic forms that may constitute a model, such as the sand paintings. This model relies heavily on the notion of aesthetics facilitating healing experience. Sand paintings are valued more for their healing qualities, but there is also an aesthetic value that makes perhaps make them more intimate for those involved in their construction.

Rationale behind this Research

The richness of healing models in any society is an exciting area of study that can not only yield fascinating information on the level of health model consciousness in that society, but also can yield a multitude of knowledge on *other* facets of that society. Health is a concept, a lived state of being that everyone has experienced in a society. Notions of what health should be can be one of the major defining elements of a society. The state of a person's health often defines who a person is, and how they decide to live the rest of the lives. The concept of health is one that is not easily defined, even within a particular culture, since the meanings attributed to it do not always agree, and are not so standardized. Moreover, when a culture, like the Navajo culture, has been so influenced by outside forces, the possibility of having a unifying concept of health becomes even more remote, and quite frankly, useless. The Navajo culture, which will be discussed in detail in my thesis paper, is one that has been historically marred by the exertions of outside forces, including the American health care system and American society in general. Such is the reason why a study in cross cultural medicine among the Navajo is particularly applicable to this society that has existed even before American society. But my thesis will go beyond the typical analysis of medicine and health and the ways that

Navajos have reconciled (or not reconciled) their healing beliefs with Western biomedicine. The social considerations that will be covered in this thesis will hopefully make a positive contribution in analyzing the ways in which Navajos think of health, an area of study that has not been studied to a significant degree. The methodology of this study could be applied to any society in the world whose health models have been influenced by others.

Furthermore, cross cultural medicine is a field of study that is growing ever more popular with an increasing number of research opportunities. The National Institutes of Health's National Center for Complementary and Alternative Medicine would probably categorize the Navajo traditional healing ways as a type of "Mind-body medicine focus[ing] on the interactions among the brain, mind, body, and behavior, and the powerful ways in which emotional, mental, social, spiritual, and behavioral factors can directly affect health. [Mind-body medicine] regards as fundamental an approach that respects and enhances each person's capacity for self-knowledge and self-care, and it emphasizes techniques that are grounded in this approach." (NIH 2004). However, the Navajo healing tradition encompasses more than just approach; indeed it is a way of life, of *healing* that has had to adapt to the ever-increasing encroachment of Western medicine. The Association of American Indian Physicians (AAIP) recently held a workshop April 28-May 1st on cross cultural medicine. The objectives of this workshop were to: "Identify strategies to improve communication between American Indian and Alaska Native patients and health professionals; describe current health issues affecting Indian communities in both reservation and urban settings; compare and contrast Western and Traditional Medicine views of health; and improve understanding of the role of

traditional healers" (AAIP 2005). This professional body of physicians is committed to bridging the gaps between traditional and western medicine since western medicine continues to influence the way that Native physicians practice medicine and interact with their patients.

Cognitive Anthropology Methods & Data Analysis

A health model is not an abstract idea but a way of *thinking* about health. One person's idea if a health model is that of a systematic way of viewing health in general: from prevention, to diagnosis, treatment, and so forth. The methods used to collect the data will help provide different angles of looking at the issue put forth in my stated thesis, which is still in its developing stage and will certainly be refined in the near future. When all the data has been collected, it will be analyzed with the thesis clearly in mind. The data analysis of the free-listing will more than likely take the shape of a quantitative study which will be a good complement to the qualitative data already collected. The data analysis will be done with the idea in mind that the results may not come out as uniform as a researcher would like; nonetheless there is academic value in uncovering data that may not be congruent but may have statistical significance in their differences. Furthermore, taking a look at the extensional and intensional meanings of a cultural model (Micco 2005) is invaluably important in reducing a model to its bare components. This method can also be refined by administering a free listing sort of exercise to patients and healthcare providers. What does healing mean to them? More specifically, what words come to mind when I say "healing," or "sickness" or "Western Medicine" or "traditional healing" or "religious healing"? Any reasonable permutation of these "what

if" questions would be appropriate, and free listing is a good starting point at revealing the backbone of a person's conceptualization of health in the social context.

Models are not only good for organizing different ideas, but also to help change behavior. In class, the health behavior model was discussed, consisting of: susceptibility, severity, benefits, barriers, cues to action, and self-efficacy (Barg 2005). Data analysis is much part of a research methodology than anything else, for it guides the direction of one's conclusions. Through a literature review and data collection phase, my thesis reconciled the different social organizations that provide an infrastructure to these health models. My units of analysis will include: People, particularly Navajos living in Phoenix, and those serving the Navajo population at the PIC and PIMC. The institutions (social infrastructures) included Phoenix Indian Center (PIC), Phoenix Indian Medical Center (PIMC), Indian Health Service (IHS), and to some extent, the Native American Church (NAC).

Dr. Fran Barg provides an excellent list of health behavior model variables that can be used in the carrying out of this research thesis in a well-designed thesis. These variables include: demographic factors, structural variables, attitudinal factors, interactional factors, and enabling factors. Every single one of these factors are quite related to the social infrastructure of a society, and can be applied to the data that will be used in my thesis. Models themselves are not wholly original but are revisions of existing knowledge, synthesized to their bare elements, re-packaged, in the hope of shedding more light on a particular focus. With my thesis, I will strive to show how the Navajo health models and Western models are revised from the social foundations, moorings if you will, of Navajo and Western society. Looking at any relevant social

health organizations (such as the IHS, and WHO) as they relate to these models can aid in shedding light on this sea of information.

Returning to Appendix B for a moment is appropriate here. Although highly compartmentalized and cohesive in nature, the diagram does suggest some sort of unity among these models which sometimes conflict. Nevertheless, the volume provides a number of articles that speak to the overlap in these four models, which will not be analyzed in great depth in this thesis. In addition to these broadly described models, there are organizational models that will be scrutinized for validity in how they compare to overarching models. For example, the *social* health model of the IHS can be seen as a derivative of the Western biomedical model. The IHS model of health can be extrapolated from the information provided from a blurb in their mission, goal, and foundation: "*Our Mission...* to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level. *Our Goal...* to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. *Our Foundation...* to uphold the Federal Government's obligation to promote healthy American Indian and Alaska Native people, communities, and cultures and to honor and protect the inherent sovereign rights of Tribes" (IHS 2005). Clearly, the health model of the IHS supports a holistic approach to health and health care, much in line with the World Health Organization's conception of health. In 1946, the WHO defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO 1946). This model was conceived at a specific point in time, subject by

the social infrastructure at the time. My thesis will delve more into the specifics of this infrastructure.

On the Indian Health Service side, Dr. Ellen Rothman, a 1998 graduate of Harvard Medical School, has been working for the IHS in Kayenta, Arizona. Dr. Rothman provides valuable insight into how the Indian Health Service (IHS) operates, and what this ultimately means for the patients the IHS is designed to serve: "All IHS physicians sign an initial contract of two years. If we decide to stay, we choose to renew our contracts year by year. Our patients are accustomed to getting to know a new physician every couple of years, and they rarely identify a primary-care physician as their own...Our Navajo community has internalized this pervasive transience and approaches us with hesitation, protecting itself from inevitable loss. Many of the physicians as well are already planning the next step within months of their arrival. Some of us stay for the long term, but most do not" (Rothman 2002). In her article, Dr. Rothman talks about how the earliest Western doctors "fought to enforce their own modern traditions and to terminate the influence of the traditional medicine men" (Rothman 2002), but that since then, Navajos have become more tolerant. Still, Western beliefs continue to pervade the Indian Health Service, a U.S. government run agency that is at times not in touch with the needs of the Navajo population. For Dr. Rothman, it can sometimes be frustrating to treat patients who do not want to submit to government regulations. For example, her pediatric patients "must receive the mandated vaccines and legally required Western treatment for critical medical problems," (Rothman 2002); these treatments are not always in accordance with the Navajo way of healing. Historically native peoples have been very suspicious of the West, and with understandable reasons. Such is the reason

why the Tribal Council in 1972 established the Navajo Health Authority, and from there the first American Indian Medical School, Navajo Area Indian Health Service, and the Navajo Division of Health came to fruition (IHS 2005). And beginning in 1955 when the Department of Human Health Services took over from the Bureau of Indian Affairs, more physicians, specifically recruited for the Indian population, began to acclimate to the Navajo ways of healing, although stereotyping of the Navajos persisted (IHS 2005). It is clear to see how this stereotyping would adversely affect the delivery of care; yet the natives realized that to be treated for their Western ailments, they would need to undergo Western treatments. Much like in Chowdhury *et al*'s study where British Bangladeshi were able to integrate their diabetic health needs into the British medical system (Chowdhury *et al* 2000), Navajos who have moved to urban areas such as Phoenix, have done the same, all at varying degrees of assimilation. Still, competing cultural models that find no common ground can make for a potentially deadly combination when it comes to patient healthcare. Issues such as treatment adherence will undoubtedly arise, and this too will be investigated in different ways in the thesis.

The models, both on the health care provider side and patient side, must be reconciled for any meaningful healing to take place (Loewe & Freeman 2000). The American Medical Association (AMA) is also committed to having its physicians be more culturally competent: "The American Medical Association (AMA) is responding to the dramatic changes in the nation's demographics and in health care delivery systems with a broad-based initiative to establish cultural competence as the "Fifth Physician Competence." Our goal is to move the medical profession and the public to create behavioral and institutional changes that will enable physicians to provide individualized,

patient-centered care that respects the multiple cultures of their patients. The *Cultural Competence Compendium* (1999), a collection of resources for physicians and the public, is an outgrowth of this effort" (AMA 2005). A collection of resources is only as good as they are used, but at least the AMA is publicly committed to making cultural competency a theory that is actually put into practice. This is their model of helping to minimize conflicts that may arise between physicians' conceptions of health and the cultural health models of their patients. There have been significant accomplishments in the Navajos achieving a greater sense of agency in their healthcare while off the reservation, and Rothman does comment (and I have personally seen on a recent trip to Arizona) that Navajos *continue* to push for increased control on how their health care needs are being met, as they should.

While looking at the social aspects of these health care models, it is also important to collect anecdotal information that will contribute qualitative data to one's research. For example, narratives provide a deeper understanding of one's research question or problem in a way that numbers cannot possibly speak to. A prime example is Sister Grace's healing narrative. Sister Grace is a Catholic healer whom two researchers had been interviewing; she developed heart problems during the course of the three years they knew her (Begay & Maryboy 2000). Appendix C is an explicit diagram showcasing how the four different healing models have each played a role in Sister Grace's recovery. Perhaps the most salient part of this diagram is the congruity that is suggested *between* the four models of healing (as discussed earlier in Appendix B): Traditional (Choctaw and Navajo), Catholic Christian, Medical Therapy (derived from the Western biomedical model), and the Native American Church (Begay & Maryboy 2000). The arrows signify

a sense of unification, and further suggest that each model is affecting the other in some capacity, much like a hub and spoke schema (Barg 2005). This particular schema would more like a collection of *models*, with Sister Grace's heart problem located at the hub. I chose to include this highly detailed diagram in my thesis for it is exactly the sort of qualitative data that will enrich my research, both in the context of the Navajos and beyond. In addition, the authors' methodology in how they conducted a study of Sister Grace's healing will be a good blueprint for my own research.

The following story is another demonstration of how native traditions have interfaced with the biomedical model of healthcare. While at a Navajo reservation hospital in Fort Defiance, Arizona, Dr. Palmer Evans, an OB/GYN, wrote an article about some of the beliefs that the Navajos hold about certain things that may happen to a pregnant woman or her baby. A few of these taboos include the woman not breathing deeply during delivery, lest the baby be sucked back up into her body; or the expectant father not killing birds, lest the child end up looking like a bird. Dr. Evans prefaces the list of taboos that pregnant woman should not do with the following: "Among the Navajo, no less than among members of any cultural background, deeply held traditional beliefs may have great bearing on the way an individual responds to suggestions, treatment, and care given in the field of health. Many of their beliefs are simply common sense, others reflect the awe with which the Indian regards native and natural phenomena, and still others are derived from sacred myths and legends which are a part of the healing ceremonies. Recognizing this fact, we desired to learn more about beliefs commonly held by Navajos concerning all aspects of the maternity cycle" (Evans 97). Outlooks such as these are exactly what is needed in cross cultural practices of medicine today. He

goes on to say, "It is imperative that we as health professionals recognize the importance and value of Native American Medicine and be willing to work within the framework of the culture of these great peoples" (Evans 99). And therein lies the key: *working within the framework of the traditional Navajo healing models* to best serve the Navajos from a Western standpoint.

Dr. Lori Alvord is a Navajo surgeon whose medical journey is part scientifically informed and spiritually inspired. Her autobiography, *The Scalpel and the Bear*, provides to readers an overview to how she was able to reconcile her Stanford medical training with the healing methods of her Navajo people. Very candidly, she describes how the "cost of my knowledge had been high" (Alvord 58). After her residency training, Dr. Alvord began working as a surgeon for the Indian Health Service, and "thought home would feel like a pair of old, worn-in moccasins, perfectly molded to the shape of my feet, that I could slip back into. I thought *Dinétah* and I would always be a perfect fit—instantly and instinctually right...But when I finished my education and returned home, I found that in many ways coming back to the reservation was as hard as leaving it had been" (Alvord 58). She had to learn how to become a healer, and not merely a surgeon. And in time, she would learn to discover the art of healing. Dr. Alvord's words truly reveal the potential of Western medicine to improve with the incorporation of *hozhoni,* meaning "Walking in Beauty," a core Navajo philosophy of balance and interconnectedness with one's surroundings. I am a strong proponent of the benefits of Western medicine, and can only see it improving with a more humanistic approach to the delivery of health care. *Both Navajo and Western medicine can learn from each other.* One very important note of reference she makes is the following: "One Native American

writer and healer, Brooke Medicine Eagle, points out that the word *heal* comes from the same root as *whole* and *holiness*. For Navajos, wholeness and holiness are the same thing. The system of life is one interconnected whole. Everything is related, according to Navajo beliefs—it is an organic and integrated way of looking at the world. The causes and cures for illness are woven into everything else" (Alvord 113). Her patients would come in and request ceremonies to help them have a successful surgery; Dr. Alvord would notice that these patients' heart and blood pressure rates were lower, and that the patients were more at ease before surgery, which has been found to decrease the risk of complications post-surgery.

Anecdotal evidence is a key part of research thesis and will be useful in the structuring of the actual thesis. Yet nothing compares to actually experiencing an event and being able to analyze it, without taking from the preciousness of the event. Field research can be an incredibly rewarding part of any research, especially as it relates to the power dynamic within the social infrastructure that help comprise these models. In her article, researcher Roma Morris observes that "Native Americans make no distinction between the sacred and the profane, viewing all phenomena and experience as imbued with special qualities, or medicines... [which] are ways of being and teaching that contribute to the integrity of the whole—for which the sacred hoop stands as the central symbol" (Morris 96). The person, or healer, administering these medicines, has a lot of power, but he or she must respect the power of nature and the sacredness of the medicine. Recently I had an opportunity to visit Arizona to conduct research for my senior thesis; my trip was funded by a grant that I had received from the Research Experience for Undergraduates Program, administered by the National Science Foundation. Fortunately

for me, my Navajo friend Nani's family hosted me. Nani's father, Victor Beck, is a medicine man for his community, and he relayed to me how the elements are important for healing, and "God made elements [such as herbs and water] for us to use" with respect (Esteve 10/2005). Us being everyone, in my opinion. I believe that we *all* have the capacity to heal on some level. Yet in a sense, because power is relative and is never absolute among us mere mortals, social roles are also relative. Therefore, healing power is relative and is only made meaningful by the social context in which is practiced. The hierarchy of healing, or lack thereof, is a direct reflection of that society's values, and this hierarchy as we have seen also impacts the healing experience for patients and healers.

While in Arizona, I had arranged to meet with healer Delmar Boni, an Apache medicine man who serves as the spiritual health liaison of the Phoenix Indian Medical Center (PIMC). Mr. Boni is a traditional practitioner who is also a substance abuse specialist. He told me that the patients he sees primarily engage in the Western biomedical model of healing because of their choice to come to the PIMC. By "incorporat(ing) native spirituality to heal spiritual ailments" (Esteve 10/2005), Mr. Boni is able to heal both the mind and body. I can remember Mr. Boni's office being quite small, with an assortment of healing artifacts littered about the room. It was an intimate space that did not feel part of a modern hospital. It was perfect in my mind for facilitating healing. I was conducting academic research on the interplay of Navajo traditional healing and Western biomedicine, but during the ceremony, as I felt the sound waves of the deer rattle reverberate all around me, and smelled the sweet smell of burning sage, I truly was transported. The rattle and sage most definitely facilitated the liminal phase of healing (part of my own construction of the health model). The liminal phase

describes that intermediate phase where someone is undergoing healing; it can last for a few minutes to years, and can be a continuous phase of existence for many people. In my mind of course I was not thinking "I am now in the liminal phase," but instead it was "peace" that I told myself, and *felt.* Mr. Boni prayed that my trip would be a safe one while in Phoenix. As he chanted, I could not help but feel a sense of peace, kinesthically and spiritually. During the blessing, I felt a complete peace descend down on me, and felt that my trip to Arizona would go smoothly, which it did! Mr. Boni certainly has a great sense of presence. On first impression, he is the type of person who has a quiet intensity about him, but is not domineering in his approach to healing. Yes, his role is that of a healer, but while taking this role seriously, he was able to put me at ease with the entire blessing experience. Mr. Boni uses an "identity-based" healing model for mending the human spirit and addressing issues of behavior modification and gratification when it comes to substance abuse. He says that most people are people looking for who they are, seeking their own personal narratives. In his opinion, a ceremony is a "release of what is ailing people form emotional scars" (Esteve 10/2005). For example, combined with a recovery program such as Alcoholics Anonymous, substance abusers, can mend their themselves of Mr. Boni observes that "western medicine *tells* people what is wrong" through psychological and physiological diagnoses. He recognizes that he has an important social role in conducting ceremonies and blessings, and tries to be as accurate as possible when addressing an ailment. The interplay of power dynamics cannot be overstated, especially when it comes to competing cultural health models. This too will be fleshed out more in my thesis.

Coming Full Circle

Throughout this thesis, I have begun to realize the full potential of Navajo healing models and Western biomedical model, and how the juncture of these models makes healing experiential for both the healers and the healed. The models that have been brought up within this thesis have been touched by the social infrastructure from whence they originated. This social infrastructure is at the heart of these models, and is the common bond linking these models, since they must all operate within the confines of the Navajo social structure and the American social structure. All the while, it will be important to keep in mind the following question: How do we know that we are understanding people's beliefs in a way that makes sense to them and to us? D'Andrade succinctly states that is the issue of identification that is the central concern (D'Andrade 1995). It will be incredibly important to be as accurate as possible in my thesis, while respecting the integrity of the Navajo people. Models have an important place in research. They can both simplify, complicate, and mislead, but they are an initial step in helping to get at the reasons why people believe what they believe, and *how* they have come to believe what they believe. I hope that cognitive anthropology will continue to help me yield more about the Navajo models of healing, their independent substantiality, and their inter-relatedness in a Navajo society that continues to be influenced by Western social forces.

Introduction to the Navajo Ways of Healing

In the spring of 2005, I had the opportunity to do pursue a project that has had more personal meaning for me than any other academic endeavor of my three years at Penn. As a result of doing this independent study, I have learned a great deal about cross-cultural medicine, and ways of learning about different healing methods. This

project first started off with a very broad attempt to understand Native American healing arts as a whole. As I delved deeper into my research, I began to realize that focusing on one aspect of Native American healing would make for a better analytical study. Consequently, I focused on examining the relationship between Navajo healing and Western biomedicine. By this time, I had already been in conversation with Nanibaa Beck, an REU student who, fortunately for me, is Navajo. Initially I had considered doing a comparative study between the Navajo and other Native groups; yet after consulting with Dr. Williams (the keeper of collections, the American section at the Penn Museum), she and I came up with a plan on how to best put together a cohesive study for my project. I ultimately decided to focus my project on the Navajos since there would be a possibility for me to visit the reservation this summer, and many of my contacts were familiar with the Navajo healing methods.

In framing my project, the Navajo culture of healing became the centerpiece of my research. As I began reading the narrative of Dr. Lori Arviso Alvord, the first Navajo woman surgeon, my knowledge of the Navajo way of life began to expand. In order for one to draw conclusions about the two different healing styles, I had to attain a knowledge base from the Navajo point of view since I am already familiar with the inner-workings of Western medicine. Reading the Dr. Alvord's *The Scalpel and the Bear* was truly an eye-opening experience, one that was reminiscent of Dr. Ben Carson's *Gifted Hands*, an analogous narrative of an African-American brain surgeon's journey of returning to his roots in order to become a better physician. Dr. Alvord's story provides for us a blueprint to how she was able to reconcile her Stanford medical training with the healing methods of her people. Very tellingly she describes how the "cost of my

knowledge had been high" (Alvord 58). After her residency training, Dr. Alvord began working as a surgeon for the Indian Health Service, and "thought home would feel like a pair of old, worn-in moccasins, perfectly molded to the shape of my feet, that I could slip back into. I thought *Dinétah* and I would always be a perfect fit—instantly and instinctually right...But when I finished my education and returned home, I found that in many ways coming back to the reservation was as hard as leaving it had been" (Alvord 58). She had to learn how to become a healer, and not merely a surgeon. And in time, she would learn to discover the art of healing.

The National Institutes of Health's National Center for Complementary and Alternative Medicine would probably categorize the Navajo traditional healing ways as a type of "Mind-body medicine focus[ing] on the interactions among the brain, mind, body, and behavior, and the powerful ways in which emotional, mental, social, spiritual, and behavioral factors can directly affect health. [Mind-body medicine] regards as fundamental an approach that respects and enhances each person's capacity for self-knowledge and self-care, and it emphasizes techniques that are grounded in this approach." (NIH 2004). However, the Navajo healing tradition encompasses more than just approach; indeed it is a way of life, of *healing* that has had to adapt to the ever-increasing encroachment of Western medicine.

Traditional Navajo Healing Methods

Scholar Caitlin O'Neil has done extensive research on Navajo healing methods. She writes of how the *haatali,* the singer who is also known as the medicine man (they are seldom women), is called after a hand trembler, or *ndilniihii* (often a woman) makes

her diagnosis (O'Neil 2003). O'Neil describes how there are nearly 100 Navajo chants all originating from the Creation Story of the Navajos: "Ceremonies last anywhere from one to nine days and include chants, songs, prayers, lectures, dances, sweat baths, prayer sticks, and sand paintings…The medicine man and his assistants are paid for their services with food, jewelry, rugs, blankets, baskets, livestock, or cash" (O'Neil 2003). Sand paintings are an important part of many sings, or ceremonies, to promote health. The paintings themselves, with over 500 kinds, are dry paintings, where such materials as ocher, charcoal, gypsum, cornmeal, powdered flower petals, and corn and other plant pollens are used. As seen on page 2 of this paper, the main symbols that appear in sand paintings include representations of the human heroes of the Navajo origin legend and the Holy People they encountered. After the sand painting is completed and the rites are administered for the person seeking the healing or blessing, the sand is swept away and "given back to Mother Earth from whence it came" (O'Neil 2003). A more detailed description of the sand paintings can be found in O'Neil's referenced article. The sand paintings confer both healing and blessings on the Navajo people, and are pivotal in Blessing Way ceremonies. These types of ceremonies are "kind of wish for good luck that gives *hozho* (harmony of the universe) to newborns, new homes, r marriages. In contrast the Enemy Way chant exorcises the ghosts of aliens, violence, and ugliness" (O'Neil 2003).

Navajo weavings throughout the years have been a wonderful reflection of the *Dine*, and how they came to be on this earth: "According to Navajo myth, the Dine or the People, were led to the Southwest from the underworld by the Holy People. Spider Man taught the Navajos how to make a loom from sunshine, lightning and rain. Spider Woman

taught them to weave." (TFAOI 2000). Perhaps at a future time, I will be giving these weavings a more in-depth look, and expanding on my work to include the weavings as a reflection of the Navajo culture, with a particular focus on how the sand paintings are represented in the weavings.

Physicians on the Reservation

Dr. Alvord's words helped me discover the potential of Western medicine to improve with the incorporation of *hozhoni,* meaning "Walking in Beauty," a core Navajo philosophy of balance and interconnectedness with one's surroundings. I am a strong proponent of the benefits of Western medicine, and can only see it improving with a more humanistic approach to the delivery of health care. *Both Navajo and Western medicine can learn from each other.* One very important note of reference she makes is the following: "One Native American writer and healer, Brooke Medicine Eagle, points out that the word *heal* comes from the same root as *whole* and *holiness*. For Navajos, wholeness and holiness are the same thing. The system of life is one interconnected whole. Everything is related, according to Navajo beliefs—it is an organic and integrated way of looking at the world. The causes and cures for illness are woven into everything else" (Alvord 113). Her patients would come in and request ceremonies to help them have a successful surgery; Dr. Alvord would notice that these patients' heart and blood pressure rates were lower, and that the patients were more at ease before surgery, which has been found to decrease the risk of complications post-surgery.

Another physician, Dr. Ellen Rothman, a 1998 graduate of Harvard Medical School, has been working for the Indian Health Service in Kayenta, Arizona. Dr. Rothman provides valuable insight into how the Indian Health Service (IHS) operates,

and what this ultimately means for the patients the IHS is designed to serve: "All IHS physicians sign an initial contract of two years. If we decide to stay, we choose to renew our contracts year by year. Our patients are accustomed to getting to know a new physician every couple of years, and they rarely identify a primary-care physician as their own...Our Navajo community has internalized this pervasive transience and approaches us with hesitation, protecting itself from inevitable loss. Many of the physicians as well are already planning the next step within months of their arrival. Some of us stay for the long term, but most do not" (Rothman 2002). In her article, Dr. Rothman talks about how the earliest Western doctors "fought to enforce their own modern traditions and to terminate the influence of the traditional medicine men" (Rothman 2002), but that since then, Navajos have become more tolerant. Still, Western beliefs continue to pervade the Indian Health Service, a U.S. government run agency that is at times not in touch with the needs of the Navajo population.

For Dr. Rothman, it can sometimes be frustrating to treat patients who do not want to submit to government regulations. For example, her pediatric patients "must receive the mandated vaccines and legally required Western treatment for critical medical problems," (Rothman 2002); these treatments are not always in accordance with the Navajo way of healing. Historically native peoples have been very suspicious of the West, and with understandable reasons. Beginning in 1955 when the Department of Human Health Services took over from the Bureau of Indian Affairs, more physicians specifically recruited for the Indian population began to acclimate to the Navajo ways of healing, although stereotyping of the Navajos persisted. It is clear to see how this would adversely affect the delivery of care; yet the natives realized that to be treated for their

Western ailments, they would need to undergo Western treatments. There have been significant accomplishments in gaining more control, including Rothman notes how the Navajos continue to push for increased control on how their health care needs are being met. The Tribal Council in 1972 established the Navajo Health Authority, and from there the first American Indian Medical School, Navajo Area Indian Health Service, and the Navajo Division of Health came to fruition.

E-mail Response (March 29, 2005) from Dr. Harriet Hopf about her time working with the Indian Health Service:

"I spent 6 weeks in the Pediatric outpatient clinic at the Tuba City Indian Health Services Hospital in Nov-Dec, 1986, while I was a 4th year medical student at Dartmouth. We didn't get much into traditional medicine in the clinic, although it was a topic of discussion educationally. About half of what we did was "well baby" and "well child" visits-- somewhat ironic titles, as virtually all required either iron for anemia or antibiotics. Most other visits were for strep throat (very common) and ear infections (also more common among Navajo because of Eustachian tube anatomy). The particular issues we faced had mostly to do with poverty. Many patients lived in hogans without running water or electricity, many miles from town (and no car). So just getting there was a big problem. Follow-up visits were a huge challenge. If we suspected infection, we gave antibiotics, as there was often no way to get culture results to the patient-- or antibiotics, for that matter.

One big issue was medication timing-- there was some sort of sheet to

demonstrate what four times a day meant (phases of the sun, I think), etc, as these are not natural concepts to the Navajo. Also, the clinic had set up a system for patients to be able to make specific time appts, rather than wait in line. Only about 10% of patients took advantage of this, because most couldn't control arrival time enough to make an appt. So going to the doctor meant waiting hours in the waiting room after hitching in-- truly an all day event. With all this, we didn't have that much time to consider traditional methods, even though all the physicians I worked with were very interested. It wasn't apparent to me that use of traditional medicine delayed coming to treatment-- other factors (distance) seemed a much bigger influence. Because kids are generally healthy, and the value of antibiotics for treating infections (about 80% of what I saw) was clearly recognized (at least by the folks who brought their kids to clinic), there also wasn't a lot of opportunity to see the use of traditional medicine. It might have been happening at home, but it wasn't brought up in the clinic visit.

The clinic was, at heart, a very western oriented clinic, although it certainly had a very Navajo flavor. The nurse was a great-grandmother and a Navajo (not very old), and I remember she was very helpful at translating both language and culture for us. I was much more aware of Navajo traditions outside the clinic. Visiting students were made welcome into the local social scene (pow-wows

including cake walks-- perhaps a little westernized!) and our preceptors encouraged us to learn about the culture. So I learned a little Navajo (only remember how to say hello now), and we discussed and experienced the balanced, nature-focused Navajo approach. And also the degree to which it was hard to maintain in the arid wasteland of the corner of desert allotted to the reservation. So what I learned wasn't so much about traditional medicine, but rather the difficulty of applying western medicine with cultural and economic barriers. I imagine I would have had a somewhat different experience in the adult clinic, and we probably didn't see the truly traditional kids.

I know Dartmouth still has a relationship and uses Tuba City as a rotation site (for the 6 week primary care clerkship), so it might be interesting to talk to some recent students, or those who rotated on the adult service. I could hook you up with someone, I think-- it's a small school, and even almost 20 years after I graduated I still know a lot of the faculty."

Dr. Hopf's experience shows that even though she was based in Tuba City (located on the western portion of the reservation), she treated her patients in a very Western environment. She cites the difficulty of "applying western medicine with cultural and economic barriers" which was another one of Ellen Rothman's concerns as well. Most Navajos' way of life does not depend on technology the way that Westerners do, and this certainly affects the delivery of health care. Ellen Rothman talks about how

the "cost of building telephone lines to isolated clusters of homes is prohibitive, and as a result nearly 70 percent (of Navajos) live without a phone" (Rothman 2003). This makes it harder for her to communicate with her patients, not to mention the kinds of issues that arise with taking medications on a time during the day (as Dr. Hopf mentions above).

Phone Interview with Dr. Palmer Evans conducted April 8, 2005, 10a.m

Dr. Evans is currently Vice-President for quality and network management of the Tucson Medical Center in Arizona. Between 1974 and 1996, he was an OB/GYN in private practice, and worked in 1972-4 Fort Defiance Indian Hospital as the chief of OB-GYN. Dr. Evans worked two years with the IHS to avoid fighting in the Vietnam War. He describes the Fort Deviance hospital at the time as being remote, as if you were in a third world county; he encountered a lot of high risk problems in obstetrics such a toxemia (blood poisoning), a high tuberculosis incidence, among other ailments. At the time, "medicine men did not come into hospital" so as to avoid contamination. Dr. Evans says that patients were sent to the medicine men first, then came to the hospital, and that "patients felt better" for it. He says that some of the patients were part of organized religions along with the Navajo religion. He was sure not to offend their culture, and wanted to facilitate what was best for the patient. Dr. Evans mentions that sings were a part of this facilitation.

When asked if he found there to be a major dichotomy in attitudes between the two models of medicine, he replies "occasionally." He cites an example of how one patient who had been suffering from cervical cancer had gone to medicine man to medicine man, and came too late to the hospital for treatment. Dr. Evans says that women had a better response to western medicine. He notes something interesting that

unemployment was high for the men, but low for the women who were involved in producing tourist goods; thus these women would come in to his office asking for contraception since having more children would be taking time from their merchandise production; however, the women did not want their husbands to discover they were taking these contraceptive measures. Some women would come in from remote places to get their tubes tied, but this would not happen in a timely manner since the hospital, under the auspices of the U.S. government, required a 72-hour waiting period from the time of request for a tubal ligation to the actual procedure. This of course compromised the women's right to contraceptive measures, and caused undue stress from a pregnancy that would result if the woman was not able to trek back to the hospital.

While at the hospital in Fort Defiance, Dr. Evans wrote an article about some of the beliefs that the Navajos hold about certain things that may happen to a pregnant woman or her baby. A few of these taboos include the woman not breathing deeply during delivery, lest the baby be sucked back up into her body; or the expectant father not killing birds, lest the child end up looking like a bird. Dr. Evans prefaces the list of taboos that pregnant woman should not do with the following: "Among the Navajo, no less than among members of any cultural background, deeply held traditional beliefs may have great bearing on the way an individual responds to suggestions, treatment, and care given in the field of health. Many of their beliefs are simply common sense, others reflect the awe with which the Indian regards native and natural phenomena, and still others are derived from sacred myths and legends which are a part of the healing ceremonies. Recognizing this fact, we desired to learn more about beliefs commonly held by Navajos concerning all aspects of the maternity cycle" (Evans 97). Outlooks

such as his are exactly what is needed in cross cultural practices of medicine today. He goes on to say, "It is imperative that we as health professionals recognize the importance and value of Native American Medicine and be willing to work within the framework of the culture of these great peoples" (Evans 99). And therein lies the key: *working within the framework of the traditional Navajo healing* to best serve the Navajos from a Western standpoint.

The Association of American Indian Physicians (AAIP) and the AMA

The AAIP recently held a workshop April 28-May 1st on cross cultural medicine. The objectives of this workshop were to: "Identify strategies to improve communication between American Indian and Alaska Native patients and health professionals; describe current health issues affecting Indian communities in both reservation and urban settings; compare and contrast Western and Traditional Medicine views of health; and improve understanding of the role of traditional healers." This professional body of physicians is committed to bridging the gaps between Traditional and Western medicine since Western medicine continues to influence the way that Native physicians practice medicine and interact with their patients.

The American Medical Association (AMA) is also committed to having its physicians be more culturally competent: "The American Medical Association (AMA) is responding to the dramatic changes in the nation's demographics and in health care delivery systems with a broad-based initiative to establish cultural competence as the "Fifth Physician Competence." Our goal is to move the medical profession and the public to create behavioral and institutional changes that will enable physicians to provide individualized, patient-centered care that respects the multiple cultures of their patients.

The *Cultural Competence Compendium* (1999), a collection of resources for physicians and the public, is an outgrowth of this effort" (AMA 2005). A collection of resources is only as good as they are used, but at least the AMA is publicly committed to making cultural competency a theory that is actually put into practice.

Personal Reflections & Future Directions

This thesis research has forced me away from the scientific aesthetic model, and moved me closer to a more culturally relevant and in-depth understanding of what medicine is, and how it is practiced on the Navajo reservation. I learned to better appreciate what it means to be a pre-med, to truly evaluate why I wanted to pursue medicine, and began planting seeds of cultural competency and understanding and bioethical perspectives that will make me a better physician. The REU program has been the primary vehicle that has helped put my college experience into perspective. It even encouraged me to make a head start in the medical school application process by writing a general personal statement.

Reiterating some of the questions I had asked Dr. Evans above, I am interested in eliciting answers on the following questions: From your own experience, what has been your impression of how the Navajos practice their own traditional medicine along with Western medicine? What sorts of objects/rituals/ceremonies have you personally seen been employed? At what point (maybe a particular stage of a disease) have you seen Navajos consult with Western physicians? More importantly, do you find there to be a major dichotomy in attitudes between the two models of medicine? I am also interested in people who have experienced both healing systems, as patients, people who work with the Indian Health Service in Gallup, Fort Defiance, and medicine men/women.

I had visited Arizona in the hope of shedding more light on the relationship between Navajo healing and western medicine. My trip was funded by a grant that I had received from the Research Experience for Undergraduates Program, administered by the National Science Foundation. In Arizona, I had arranged to meet with healer Delmar Boni, an Apache medicine man who serves as the spiritual health liaison of the Phoenix Indian Medical Center (PIMC). Mr. Boni is a traditional practitioner who is also a substance abuse specialist. He told me that the patients he sees primarily engage in the Western biomedical model of healing because of their choice to come to the PIMC. By "incorporat(ing) native spirituality to heal spiritual ailments" (Esteve 10/2005), Mr. Boni is able to heal both the mind and body.

I can remember Mr. Boni's office being quite small, with an assortment of healing artifacts littered about the room. It was an intimate space that did not feel part of a modern hospital. It was perfect in my mind for facilitating healing. While I conducted my interview for my thesis research on the interplay of Navajo traditional healing and Western biomedicine, but during the ceremony, as I felt the sound waves of the deer rattle reverberate all around me, and smelled the sweet smell of burning sage, I truly was transported. The rattle and sage most definitely facilitated the liminal phase for me, but in my head of course I was not thinking "I am now in the liminal phase," but instead it was "peace" that I told myself, and *felt.* Mr. Boni prayed that my trip would be a safe one while in Phoenix. As he chanted, I could not help but feel a sense of peace, kinesthetically and spiritually. Mr. Boni's soothing yet authoritative voice, the sound of the rattle, the intimate space of the earth-tone decorated office all contributed positively to my healing experience. It was as if I had been transported to another dimension as all

of these liminal elements culminated into an experience I will never forget. During the blessing, I felt a complete peace descend down on me, and felt that my trip to Arizona would go smoothly, which it did! Mr. Boni certainly has a great sense of presence. On first impression, he is the type of person who has a quiet intensity about him, but is not domineering in his approach to healing. Yes, his role is that of a healer, but while taking this role seriously, he was able to put me at ease with the entire blessing experience.

Mr. Boni uses an "identity-based" format for healing the human spirit and addressing issues of behavior modification and gratification when it comes to substance abuse. He says that most people are people looking for who they are, seeking their own personal narratives. In his opinion, a ceremony is a "release of what is ailing people form emotional scars" (Esteve 10/2005). For example, combined with a recovery program such as Alcoholics Anonymous, substance abusers, can mend their themselves of Mr. Boni observes that "western medicine *tells* people what is wrong" through psychological and physiological diagnoses. He explains that when doctors make a diagnosis, they are giving a name that confers an identity to the patient's illness. Mr. Boni likened this with a naming ceremony which serves the purpose of naming an illness, a person, or what have you. The story of Mr. Boni's grandfather, Duncan Stanley, is a good example of how a social hierarchy can impact someone's identity. Years ago, the Department of Indian Affairs had given Mr. Stanley food and cattle which the department had branded "G8." From that point on, Mr. Stanley associated himself with the name G8 in large part because his cattle had been given that designation. Consequently, he became known as G8 more so than his first name, Duncan. The story is not related to anything health-related, but it is a demonstrative anecdote that a name holds a lot of power, especially

when the name is "given" by a person of higher authority. In the same vein, doctors have the type of power to affect their patients just by the diagnoses made.

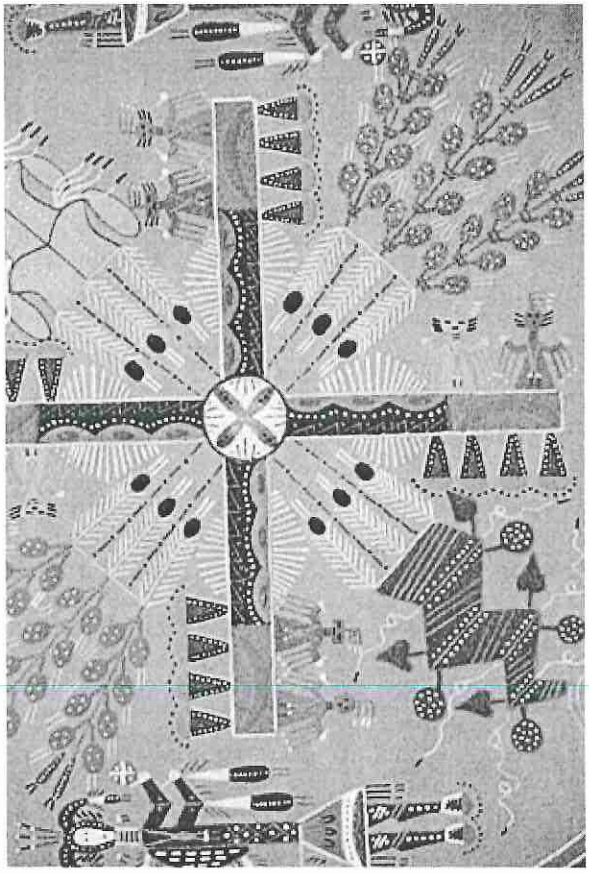
This is why it is so important for health care providers, from whatever healing perspective, to sufficiently gather their patients' narratives and illness histories to make accurate diagnoses that will then impact how they live their lives. These narratives themselves are influenced by social factors beyond their control, such as the *social environment* in which these illness narratives are constructed. The most important lesson learned from this research is that healing models are culturally informed, and that social infrastructures contribute to people's understanding of the world around them. We must not take the influence of these social infrastructures for granted, for all too often they will play a major role in how patients perceive their healing experience to be, and might very well play a role in the *outcome* of their healing experience, for better or worse (refer to Appendix D for interviews shedding more light on this particular phenomenon). We as members of the academia and health care professionals, must be more focused on the types of underlying social mechanisms found in institutional settings that will impact someone's perception of what health entails.

Acknowledgments

At this time, I would like to take the opportunity to thank the many people without whom this project could not have been possible: My thesis advisors Dr. Janet Monge & Dr. Fran Barg for their wonderful guidance, Nanibaa Beck and her family for their hospitality in Arizona, the National Science Foundation: Research Experience for Undergraduates for funding my trip, Dr. Evans Palmer and Dr. Harriet Hopf for their anecdotal experience highlighting some of the social infrastructures, and Dr. Lucy Williams for helping me to

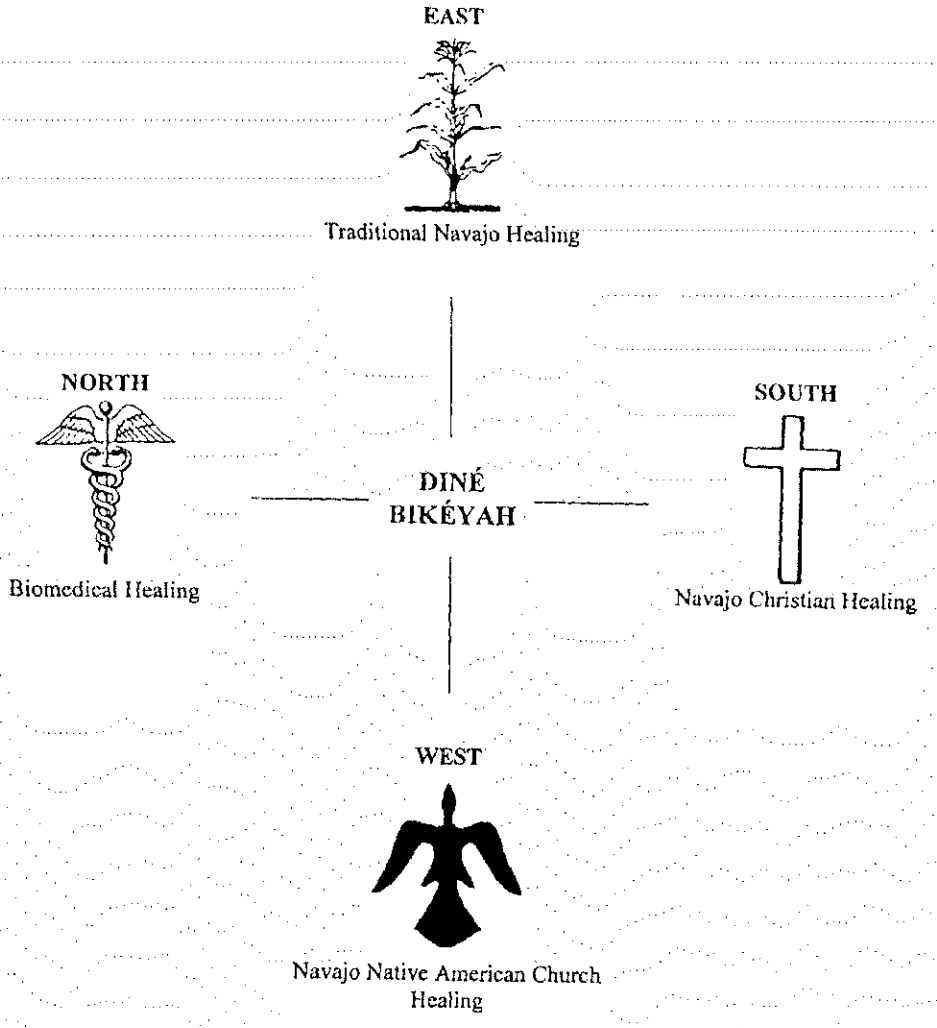
focus on the Navajos as a possible point of study. I would also like to thank the Phoenix Indian Center and Phoenix Indian Medical Center, in particular Delmar Boni, for their openness and honesty. God has truly blessed me with a countless number of people whom I could not possibly name, so thank you all!

Appendix A: Navajo Sand Painting



"Sand painting is a Navajo art used in healing ceremonies. A healer creates the painting from colored sand, crushed rock, and plant pollens in a design that depends upon the patient's ailment and follows a strict formula. The patient sits upon the finished painting as the healer sings or recites the proper chants. Human figures and plant forms typically appear in sand paintings, as in this example" (MS Encarta 2005).

Appendix B: The Health Care System in Contemporary Navajo Society



Source: Navajo Healing Project, Case Western Reserve University, (Csordas 2000): 465.