FURTHERING PERSPECTIVES

Anthropological Views of the World











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Editors' Note:

The journal in your hand is the end product of a year of hard work and dedication by many students from the anthropology department at Colorado State University and the CSU anthropology community at-large. We would like to express our sincere appreciation to the members of the editorial board, whose expertise and insights have raised the standards of the papers that compose this journal. We were fortunate to draw upon former professors of the anthropology department, and current adjunct professors, all of whom selflessly dedicated time and energy to this project. Thank you to: Dr. Calvin Jennings, Dr. Esther Pressel, Dr. Eden Welker, and Professors Hollie Kopp and Kim Nichols-Bown.

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The AGSS Journal Committee welcomes and encourages feedback from the anthropological community, and particularly any other student organizations that have, or are planning to, take on a similar project. The more communication and collaboration there is amongst students of anthropology, the more we can facilitate sharing of knowledge.

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I. Literature Review

Assortative Mating in Humans: Is it Animal Magnetism or Simply Convenience?

Rosaline A. Danzman

"These novel forms of cultural learning allow human beings to, in effect, pool their cognitive resources both contemporaneously and over historical time in ways that are unique to the animal kingdom."
Tomasello 2000

Abstract- *Expressed human preferences regarding mate choice are well documented. However, some disparity between expressed preferences and observed practices exists. While non-human assortative mating studies focus on biological factors, human assortative mating studies have mainly focused on factors of economy and convenience. Furthermore, many investigations into the biological factors underlying human assortative mating draw heavily from non-human studies, making inferences about human behavior based on non-human animal behavior despite the overwhelming evidence that non-human animal behavior cannot be correlated to human psychology. Human behavior is strongly influenced by self reflective conscious thought, arguably lacking in non-humans. Additionally, humans alone exhibit complex cultural systems which exert tremendous pressures on human behavior. Therefore, little evidence exists to support the claim that humans exhibit patterned, assortative mating based on biological factors.*

There is no doubt that humans express preferences regarding who they choose as a sexual partner, husband/wife or mate, but is there evidence to suggest that human mate

preferences are biologically driven and fall into some recognizable pattern as seen in many non-human animals? If so, how do we explain observations that contradict the existence of any recognizable pattern if one does exist? As the media so blatantly shows by exploiting our most fundamental desires, humans have distinct preferences when it comes to choosing sexual partners. If you believe the press, in most cultures females are most desirable when young, submissive and large breasted while men are more attractive if they are tall, muscular and tan. Unfortunately most of us do not fall into either of those categories, so if we are to all choose a mate based on these criteria, then a huge segment of the population will be very lonely. On the other hand, if human mating does not follow this or any other recognizable pattern based on genetic traits, we may all still have a chance at finding a partner and maintaining the population. Lucky for us (or maybe unlucky), there is some disparity between what people desire and what people actually go home to. We can't all have our ideal mate, especially if there is a consensus on what constitutes "ideal" (Botwin et al. 1997). To further complicate matters, the traits described above are not considered desirous for all human groups. Attractiveness varies among cultures and changes with the passage of time (Becker 1973). Additionally, in virtually all human groups there are some individuals (though very few) that break the molds their ancestors have so thoughtfully established. Still further, we may question whether our true desires are a product of enculturation or if our cultural norms are a result of our true desires. Humans resist the detection of a distinct pattern of Assortative Mating due to the existence of complex culture; therefore one likely does not exist.

Assortative Mating (henceforth AM) is a specific form of sexual selection resulting in non-random pairing of mates that are similar or dissimilar with regard to one or more biological traits. Becker (1973) described two opposite modes

of AM, positive and negative, where positive AM denotes a positive correlation between male and female traits (a tendency to be more similar) and negative AM denotes a negative correlation between male and female traits (a tendency to be more dissimilar). Many people use terms such as "like attracts like" and "opposites attract" when chatting with friends and compatriots about couples they know when in fact, no single pattern has been demonstrated.

In this brief discussion I will consider the factors impinging on the study of AM patterns in humans. Examples from non-human animals are given to illustrate recognizable mating patterns as well as indicate some overwhelming differences between humans and non-humans that cannot be ignored in any argument regarding behavior. A perfunctory look into human cognition and a comparison with non-human animals will be necessary to formulate a hypothesis regarding human biological AM patterns. Views and findings of biological and social scientists are discussed, differentiating biological aspects of AM from aspects of convenience. Additionally, possible applications of this and future research in the context of human evolution and the origin of the genus *Homo* is considered. I conclude by proposing avenues for future research on the study of human mating and sexual preferences.

Humans are notorious for choosing inappropriate mates despite a family's interference on an individual's behalf. Many individuals, in contrast, are compelled to take mates for reasons other than attraction only to end up in a similar situation. Individuals who fail to secure a mate who embodies their ideals experience relatively low satisfaction in their relationship (Botwin et al. 1997). Divorce is quickly becoming the norm in many western societies and spousal abuse is rampant as are crimes against women in general (Canada Center for Justice Statistics 2004; U. S. Department of Justice 2007; CDC 2006). Additionally, many humans chose mates of the same sex,

throwing a monkey wrench into the prevailing assessment that mate choice is based on a desire to procreate successfully. Biologists and social scientists alike argue that an animal chooses the mate that will be most likely to fulfill their needs, illustrating the degree of import science has put on sexual selection as the driver of evolution (Barber 1995; Becker 1973, 1974, 1981; Small 1995; Greiling and Buss 2000). While the needs of humans differ greatly from those of the black-tailed prairie dog, scientists seem to have downplayed the significance of sexual selection in all areas of self-reflective study and human evolution until recently (Jones et al. 1995). It remains unclear if the acquisition of resources or even the assurance of viable offspring is in fact the driving force behind mate choice in humans due in part to lack of scientific endeavor in this area for a century after Darwin's famous publications in which he even went so far as to hypothesize that observed differences between human cultures may be a result of sexual selection (Jones et al. 1995). Further, though observable patterns of AM have been reported in non-human animal species no clear patterns of AM have been observed in all humans. That is, in all non-human animals studied thus far with respect to AM, a finite set of desirable behaviors and characteristics has been identified. To date no human studies have provided conclusive evidence illustrating biological patterns of AM. There seems to be a lack of consensus on what behaviors or physical traits should be included in a hypothesis of human AM, indicating the extreme unlikelihood that such a list could be compiled. Further, in non-human animals there is evidence that select phenotypic factors directly correlate with genetic factors (Malo et al. 2005). It would not be too great a leap to postulate that, in humans, a similar correlation exists between phenotypic traits, personality traits and cultural traits.

Our own observations confirm that humans have explicit preferences when choosing a mate. Some physical and

behavioral characteristics are much more desirable than others. With regard to facial attractiveness, men generally prefer females with large eyes, small noses and full lips, according to Doug Jones and his associates (1995). Jones et al. (1995) also report that women put much less importance on physical attractiveness than do men. Character traits such as kindness, understanding and dependability top the lists of both men and women in desirability (Botwin et al. 1997). However, there is an obvious disconnect between our expressed preferences and observed practices (Botwin et al. 1997). Virtually all adult humans find a mate (Simao and Todd, 2003), or at the very least, engage in sexual activities with another adult human, seemingly regardless of either's ability to provide resources or contribute to the production of viable offspring.

Non-human animals, in contrast, exhibit not only strong preferences in mates but also show signs of acquiring their preferred mate. Based on simple observation at any respectable zoo one may witness numerous species exhibiting sexual dimorphism, some to an exaggerated degree. Many of the observable sexually dimorphic traits are presumed to be a result of selectivity in mate choice (Malo et al. 2005). The most common example is the peacock (genus *Polyplectron*). The peacock carries around an excessively long tail (in addition to cooing incessantly) with which he woos a peahen. Peahens have evolved a preference for males with longer, brighter tails (and copious amounts of cooing) and thus assortatively mate based on this and other preferences.

The male Vogelkop bowerbird (*Amblyornis inornatus*) constructs and decorates a bower or miniature archway to attract a female (Frith and Frith 2004). The females preferentially mate with the male with the most appealing structure in addition to his vocalizations and personal appearance (Frith and Frith 2004). The males of two allopatric populations of Vogelkop differed in structure and decoration of bowers, while females of each population maintained a similar

preference for larger bowers with more blue and red decorations (Frith and Frith 2004). Not surprisingly, Clifford B. Frith and Dawn W. Frith (2004) discuss AM in bowerbirds with respect to the possible benefits females have to gain from their discrimination, suggesting males offer direct benefits in the form of resources, thereby increasing the likelihood of survival of the female and her offspring and indirect benefits in the form of genetic traits for offspring. Frith and Frith (2004) go on to add that the latter of these benefits is not considered in benefit models of sexual selection as they do not immediately benefit the female. It can be assured that the mechanism of male propensity for building and female preference for those males is either instinct or imprinting (Ihara 2003).

Sexual dimorphism is also observed in mammals in the form of male decoration for both intrasexual selection (intimidation of rivals) and intersexual selection (attraction of mates), though it is not seen as frequently as in birds. Male mammal decoration is exemplified by the antlers of the red deer (*Cervus elaphus*), attracting females for mating, or as is most often assumed, intimidating males (Malo et al. 2005). According to Aurelio F. Malo and colleagues (2005), the red deer's antlers are not only weapons for competition with other males, but an advertisement to females regarding fertility. Male red deer with comparatively large antlers are more likely to reproduce successfully due to their superior sperm quality and sperm production, not necessarily their ability to prevent other males from mating by competition (Malo et al. 2005). Perhaps the correlation between antler size and sperm quality and production indicates how the preference evolved in females, an aspect of sexual selection largely ignored. Females consistently choose males with large antlers as mates, insuring her offspring will acquire the most desirable genetic traits. Female offspring will likely inherit a preference for large antlers in a mate and male offspring will likely inherit the predisposition for large antlers (Malo et al. 2005). According

to the "runaway selection" theory originated by R. A. Fisher and interpreted by Nigel Barber (1995), this AM pattern will, over many generations increase the homozygosity of the population with respect to the particular aforementioned traits while acting to magnify the selectivity of females and ever increasing the size of male antlers until the benefit of having them outweighs the cost of producing them and lugging them around. Thus, it is no surprise that many deer shed their antlers at the end of the mating season, very likely to alleviate the cost.

Barber (1995) listed as one of the predictions of the runaway selection theory that no correlation will exist between the expression of a trait sexually selected for and the individual's health and fitness, largely due to another prediction, that preferences are generally arbitrary. Additionally, the runaway selection approach assumes that the sexually selected trait is energetically or otherwise costly and that individuals doing the selecting will prefer individuals exhibiting the trait to an exaggerated degree (Barber 1995). To address these issues Barber (1995) presented the "good genes" approach which argues, among other things, sexually selected traits indicate health and fitness; therefore individuals exhibiting a desirable trait will be selected for as an indirect result of their phenotypic superiority. Though more modern interpretations of the good-genes model ascribes selection of a trait to health and fitness rather than genetics, the findings of Malo and colleagues (2005) follow the good genes approach in that antler size is correlated to sperm quality and production. Thus, larger antlers are not arbitrarily selected. Further, it is likely that human preferences are also not arbitrary but rather the result of a long history of selecting healthy, fit mates.

Large antlers in deer are used as a means of advertising one's health and fitness, but advertising one's attributes is not restricted to overt physical paraphernalia. Communication is arguably the most important aspect of mating strategies in virtually all sexually reproducing animals. Both human and

non-human animals must have the ability to relate their feelings to others by communicating through so called body language, verbal utterances, or actual language. However, not all communication systems are created equal. Non-human animal communication systems are greatly limited in their use; that is, they can only be used to communicate (whereas human language performs a variety of other cognitive functions described by Derek Bickerton (1995)). Often, the terms language and communication are used synonymously much to the dismay of linguists such as Bickerton (1995). Bickerton (1995) uses the simile; language is to communication as cars are to driving, illustrating that language is an object, albeit it abstract, and that communication is one of its uses.

Language is, without question the most complex communication system observed in the animal kingdom. Likewise, the information able to be conveyed by language greatly surpasses in complexity that of any non-linguistic (non-human) communication system (Bickerton 1995). As noted by Bickerton (1995:16) though, "[complexity] fails to account for the absolute discontinuity between humans and other species." The expectation thus, would be a gradation from the least complex information one can communicate about to the most complex information one can communicate about (Bickerton 1995). What is observed is similar to the expected gradation for non-humans; in contrast though, humans soar off the chart in the increasingly complex direction (Bickerton 1995). Language allows humans alone to communicate about an infinite number of things, unlimited temporally or spatially due to the open nature of language (Bickerton 1995). In contrast, non-human animals are limited to communicating about here and now. Additionally, Bickerton (1995) argues that non-humans are further limited to first-order thought or intentionality. Primates have been shown to recognize the self; however, it is argued that they do not recognize others as having a self (Bickerton 1995). Conversely, humans have the

ability to think and communicate at the second-order level and higher. For example, even human children would understand the statement "John thinks that Sarah wanted me to go to the store yesterday, but I don't think he knows that Sarah really wants to go tomorrow."

Language is a necessary, though not a sufficient condition for second-order and higher intentionality which, for our purposes, is characterized by self-reflective conscious thought (henceforth SRCT). Other forms of consciousness do exist, connecting the neural systems of all complex organisms with their immediate environments (Bickerton 1995). SRCT allows us the further awareness of our own consciousness therefore we can not only hear a train whistle, we *know* that we can hear it (Bickerton 1995). Furthermore, we can recognize that other humans share this capacity; thereby making possible the creation of complex social systems. According to Michael Tomasello (1999:509) regarding culture, "The key adaptation is one that enables individuals to understand other individuals as intentional agents like the self."

Culture, arguably an exclusively human trait, is the system by which humans organize using SRCT and language. It is also the system by which we segregate ourselves into families, classes, tribes, races and many other types of groups, despite the fact that some are purely conceptual in nature (Garfinkel et al. 2002). Humans learn, through culture how a girl/woman and boy/man should act and with whom it is and with whom it is not acceptable to associate, hang-out and mate. With such strong influences, it is difficult to imagine that any individual chooses a mate according to ones own true biological preferences. In fact, in many societies mates are chosen for individuals by family or another agent. While non-humans may, though doubtfully, assortatively mate based on learning as opposed to instinct, they lack the influence of complex culture and SRCT.

There can be no doubt that most humans that mate do so preferentially regardless of cultural characteristics. Numerous studies have shown that humans express more interest in other humans that are physically attractive, with attractiveness defined simply as pleasing to the senses, allowing for variation among cultures and over time. In fact, Ward Rommel (2002) declares that over the past few decades in the USA physical attractiveness has become more important for both males and females. Furthermore, David M. Buss (1989) contends that desire is the underlying force behind sexual behavior in humans. While desire may be an important psychological force, there can be no doubt that some disparity between expressed preferences and observed practices regarding human sexual behavior exists (Botwin et al. 1997). Botwin et al. (1997) note that when virtually all individuals in a population desire the same qualities in a mate but only a limited number of the population express those qualities, some individuals will have to settle for something less than desirable.

Since the development of economic theories regarding marriage in the early half of the 20th century, economists and social scientists have explored the non-biological factors driving mate choice, though until recently, the center of attention has been on marriage and not on mating activities. Some common configurations emerged concerning the traits by which some humans tend to assortatively mate. Robert D. Mare (1991), in addition to many other sociologists and economists, indicates humans exhibit a propensity to select mates with similar education level, ethnicity, religion, and occupation, among other traits that are based on convenience (Becker 1973, 1974, 1981, 1989; Buss 1989, 1998; Corrreia 2003; Gangestad and Simpson 2000; Garfinkel et al. 2002; Greiling and Buss 2000; Lewis and Oppenheimer 2000; Mare 1991; Qian 1998; Rommel 2002; Simao and Todd 2003). Each of these traits is acquired through learning, as they are cultural constructs. Humans choose mates within a particular sphere

Gary S. Becker (1973) termed a "marriage market," though it is unclear if Becker defined marriage markets according to geographical or cultural boundaries. Marriage markets, according to Becker (1973), result from intersexual competition for mates. Nonetheless, mates are chosen from a limited pool of potential candidates where ones own traits, as listed above, may influence which pool or marriage market is available to them (Mare 1991). Moreover, human behavior, especially that which is associated with mate choice may be inhibited by cultural constructs such as marriage markets (Lewis and Oppenheimer 2000).

Investigating human AM with respect to marriage, Becker (1973:815) defined AM as a "correlation between the values of the traits of husbands and wives..." Hypotheses regarding human AM generally centered on the similarity (or difference) between an individual and their mate with respect to one or a set of non-biological traits. For example, arguably the most popular topic within the AM spectrum is that of educational AM; the foremost question asking if men and women have a propensity to choose mates with a similar level of education, a higher level or if there is no preference at all. While Becker's definition of AM differs somewhat from how biologists and anthropologists regard AM it does not stray from the fundamental elements; that of preferential mate selection. It is the focus that differs. Becker and many other social scientists are attempting to understand the economic and social effect of human AM by establishing patterns based on convenience such as propinquity and education level as noted in Correia (2003), while biological studies focus on genetic and physiological aspects such as height and parasite resistance.

Despite the dissimilarity in focus, the approach that is used by both the biological and social fields regarding human AM is similar. Both fields view AM in terms of investment, resource acquisition and fitness; thus, maximizing benefits and minimizing costs are the presumed central intentions of any

animal seeking a mate. Parental investment, first put forth by R.L. Trivers in 1972 is thought to be the major driving force behind sexual selection (Barber 1995). Females and males of sexually reproducing species will adopt different mating strategies based on the investment required of each (Barber 1995; Buss 1998). Given that the reproductive success of males of most animal species is a function of many females with whom he has mated; it can be presumed that if males act to increase their fertility, they will be as promiscuous as possible, investing as little time and energy as possible (Barber 1995). On the other hand, if they act to increase the probability that their sperm meets its destination without interference, they will remain with the female for various amounts of time depending on the species (Buss 1998). Therefore one would expect a minimum-investment-male to show little mating preference in view of the fact that his "goal" is to copulate with as many females as possible. The only preference expected then would be the preference for females of his own species that are not with child and are of breeding age. Males that form monogamous bonds with a female may be considered to exhibit the highest level of investment. Presumably, high-investment-males are considerably more fastidious than those previously described. These males' "goals" will include insurance that the female is not cuckolding him (guaranteeing the offspring are his) and security of future copulation with that female (Buss 1998).

Mating strategies of females differ considerably, as Buss (1998) and Barber (1995) would argue, as a result of their level of investment. Female animals generally are the higher investing sex in offspring production and rearing. Female mammals especially make an extraordinary investment in their young, having extended gestation periods, placentation, lactation and increased infant dependence (Barber 1995). Females have the responsibility of insuring they and their offspring will have food and water, typically provided by

males, and that offspring will receive the best possible genes. Mating preferences exhibited by females are thus expected to lead females to choose strong males of their own species that have high social status. Traits that may indicate these attributes are large body size (or of some specific body part), elaborate coloration, assertiveness, boisterousness and symmetry (Gangestad and Simpson 2000). Many of these traits and those of females are generally viewed as adaptations (Buss 1998). Though most animals are not consciously aware that the "goals," as stated above, are what is driving their behavior, many scientists believe mating preferences to be adaptations toward these "goals" (Barber 1995).

Vogelkop bowerbirds are presumed to be interested in the acquisition of resources and the production of viable offspring (Frith and Frith 2004). To that end, females are observed preferentially choosing males that are strong builders, vociferous and the proper color (Frith and Frith 2004). These traits apparently indicate the male's access to resources; food, water etc., in addition to his health and fitness. Males, on the other hand will attempt to seduce any female that is willing, as his main goal is to deposit sperm in the proper location as often as possible. Female Vogelkops will invest considerably more time and energy in the production and rearing of offspring than the male (Frith and Frith 2004).

Not unlike the bowerbirds, Gorilla (*Gorilla gorilla*) mating behavior indicates that females prefer males that exhibit signs of good health and fitness while males, the lower investing sex attempt to maximize their reproductive success by mating with every female available, willing or not. Primates have varied and complex social structures (Strier 2003). Increased phylogenetic and behavioral complexity complicates the detection of discernable patterns of AM. The chimpanzee (*Pan troglodytes*) for example, our closest extant relative, has a highly complex social structure exemplified by their matting strategies. Stumpf and Boesch (2004) assert that due to female

chimpanzees' extreme promiscuity during estrus, their mate preferences may not be an honest reflection of their sexual behavior. In part, this behavior results from the females' desire to confuse paternity and thwart future aggression toward her infant and herself by males (Stumpf and Boesch 2004). However, during a female's estrus cycle there is a short period of time when fertilization is most likely to occur. It is at this time that Stumpf and Boesch (2004) report females become much more selective regarding mates. Future studies, Stumpf and Boesch (2004) suggest may successfully discern female chimpanzee mating preferences by focusing on behavior during the restricted periovulatory period.

According to the cost-benefit approach, one would expect humans to differ little from non-humans in prefered biological indicators of health and status. However, human mating strategies do not follow a single formula; rather, each sex has a diverse repertoire of strategies to use according to varied circumstances (Buss 1989). Not surprisingly, much interest has been given to long-term versus short-term mating strategies in an attempt to understand why one sex has a propensity for short-term engagements while the opposite sex typically prefers long-term relationships. As a result of the variation in strategies, human males make variable investments that can vary from one individual to the next and even in one individual according to his changing interests (Gangestad and Simpson 2000). Females as well, exhibit some variation in investment in reproduction (Gangestad and Simpson 2000; Greiling and Buss 2000). Culture offers a confounding factor in the study of human AM. Cultural traits as opposed to biological traits drive the selection process; additionally, changing gender roles impact the desire to procreate. When studying the mating preferences of non-humans the cost-benefit approach is sound and one of the few available. Given that we have language and culture one would expect humans to employ the most effective, least energetic strategy for mate

choice. Contradictorily, human mating strategies do not appear to follow the rules for the cost-benefit approach; human females don't often require suitors to submit financial statements and undergo medical exams prior to intercourse and human males do not request potential mates to submit to a fertility test.

Observed behaviors indicating preferences, as regards mate choice, are based on biological factors in non-humans, though interpretations apropos the psychology underlying the behaviors may be inadequate (Povinelli et al. 2000). A psychological continuity among species is assumed to exist (Povinelli et al. 2000). This is the supposition that if we can understand the psychology driving our own behavior then when that behavior is observed in non-humans we can assume that similar psychology is in play (Povinelli et al. 2000). As Daniel J. Povinelli and his colleagues (2000:510) so persuasively argue, "similarity in behavior may not reflect similarity in psychology" due to the fact that second-order intentionality, exhibited only by humans is an important factor in human behavior. Therefore we cannot make inferences about the psychology driving non-human behavior, especially in view of the fact that similar behavior is not observed in humans and non-humans as regards mate selection.

As observed in *drosophila sp.*, some males mate with multiple females, while other males mate not at all (Barber 1995). Humans, conversely, rarely fail to engage in sexual activities. Those that do are either incapable of reproducing as with individuals born with genetic diseases such as Progeria whose victims never reach sexual maturity, or acquire diseases and deformities that negatively affect their reproductive success, or simply choose not to mate, as with celibate religious practitioners.

Theoretically, if all populations and sub-populations reproduce at the same rate no change will occur in the phenotypes or genotypes apart from random changes. If, on

the other hand, some populations or sub-populations reproduce more rapidly, or show higher "fitness" subsequently the genes carried by those individuals will become more prevalent, thus causing a genetic shift in the population as a whole. In humans this shift would not necessarily be the result of sexual selection based on biological traits but rather on cultural pressures. Some alternative explanations are that the shift could be the result of some populations or sub-populations over-procreating as a result of religious or cultural beliefs that either promote procreation indirectly or place a high value on offspring, or possibly as a result of increased unemployment, thus giving individuals more opportunity for intercourse. Likewise some cultural groups may experience low fertility and thus decrease in population or even become extinct as with the Shakers of the North Eastern United States towards the end of the 18th century. Consequently, over many generations, some cultural groups may become more prevalent while others diminish or fade away entirely in view of the fact that humans tend to mate within their own cultural group.

Many predict that positive AM for a particular heritable trait will increase the homozygosity within the population with respect to that trait, while increasing the heterozygosity among the species as a whole (Brodin and Haas 2006; Becker 1974; Coyne and Orr 2004; Darwin 1874[1871]; Jones et al. 1995; Kellogg 1906). AM thereby becomes a mechanism by which cultural boundaries are maintained over time (Garfinkel et al. 2002). Given that humans preferentially mate within their cultural groups it may be conceivable that human groups will continue to diverge, eventually causing culturally imposed behavioral and reproductive isolation. Coyne and Orr (2004) reason AM is a necessary condition for speciation in sympatry as did Darwin (1874 [1871]), Lutz (1905) and Kellogg (1906) a century ago. To properly understand how different cultural groups have come to differ, a look into the prehistoric geographic distribution in humans across the world will be

required. Only by tracing our origins and that of culture can one expect to develop reasonable hypotheses about our presumed divergence of biological and cultural traits over the course of pre-history. Additionally, future studies may examine the evolutionary history of cultural groups with regard to genetic divergence, the rate at which change occurred prior to globalization and since, presuming this factor has impacted the extent to which cultural groups experienced isolation. An interesting theoretical question yet to be addressed is; can culture drive speciation?

In the Animal kingdom humans are an anomaly due mainly to our possession of culture. Discovery of a pattern for human AM based on biological factors is confounded by the existence of culture. Just as humans exhibit preferences for food, clothing styles and literary genres, we have preferences for sexual partners; these and many other preferences are influenced by culture. Presumably, some biological factor underlies all preferences, mating and otherwise; however, only the most punctiliously devised and executed experiments can possibly offer any definitive answers on the subject. Only if it can be established that biological factors drive cultural norms can we hope to discover a pattern of AM in humans due to the intense influence culture has over our decisions. As Buss (1989:175) speculated "current mate preferences may reflect prior selection pressures." Such broad questions may require multi-disciplinary teams of researchers to investigate not only what behavioral patterns exist in modern humans with regard to AM but also the evolutionary histories of these behaviors.

Whether there is or is not a pattern of biological AM one could posit that the development of human consciousness and the development of human mate preferences based on cultural constructs are somehow interrelated. A theory regarding the relationship between cognition and AM by convenience may have implications for the study of human evolution or the evolution of culture. The field of behavior

evolution in humans is an area of science that may offer interesting insight into the subject of human mate choice; however, it is unlikely that a distinct pattern of assortative mating will be revealed.

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Bodies of Madness: Perceptions of Insanity in the Nineteenth Century

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Abstract- *This paper examines popular and professional notions of insanity in the United States during the nineteenth century. During this time, perceptions were shifting from a humoral, morality-centered viewpoint to one centered in biology and science. By examining these opposing paradigms, from literature and historical data analysis, we can begin to understand how ever-shifting social and cultural norms and values affect perceptions of insanity and the insane. Embedded in this discussion are ideas of illness and health, normal and abnormal, reason and madness.*

"They called me mad, and I called them mad,
and damn them, they outvoted me"
~Nathaniel Lee
(Upon being committed to a lunatic asylum; ca. 17th century)

Photo adapted from Gamwell and Tomes 1995:74
(originally from Bucknill and Tuke 1858)

The purpose of this paper is to examine the perceptions of insanity in the United States during the nineteenth century. This era is important because it was a time when perceptions were shifting from a religious viewpoint centered on morality, in which behavioral treatment of the insane could reverse the condition, to a scientific rationalism that viewed insanity as biologically based and hereditary. The juxtaposition of these two contrasting paradigms illustrates how the perceptions of insanity are shaped and renegotiated with shifting cultural values and norms.

Perceptions of insanity influenced not only medical treatment of the insane, but also social stigmas and perceptions of normality and health. A literature review will utilize contemporary books and journal articles that examine the history of asylums and treatment of the insane, and also historic articles from the late nineteenth and early twentieth century that discuss the popular, medical, and political ideas informing ideologies and policies for the treatment of these individuals. Admission records from the Colorado State Insane Asylum between 1879 and 1899 will be analyzed to determine what demographic was admitted to the asylum, what symptoms these individuals were committed for, and what their diagnoses typically were.

Theory and Methodology

This paper will utilize a historical approach to literature review, with firsthand accounts being interpreted from literature and records from the late nineteenth century. A critical interpretive medical anthropology approach will contribute to the data and analysis by identifying the conscious and unconscious metaphorical conceptions of the body and body narratives, as well as the social, political, and individual uses of these concepts. The individual body,

social body, and body-politic levels of analysis, as well as notions of Foucault's biopower, will inform this discussion.

A critical-interpretive approach to medical anthropology is useful in an analysis of the cultural and historical contexts of biomedicine and the mind-body dichotomy (Lock and Scheper-Hughs 1990). Knowledge regarding the body is culturally constructed and continuously renegotiated throughout time and space (Lock and Scheper-Hughs 1990). The social and cultural meanings of humanness and perceptions of body-self are necessary in a discussion of the mentally insane.

Analysis on the level of the three bodies is essential in the critical-interpretive approach. The individual body addresses the lived experience of the embodied self, also known as the body-self; the social body refers to "the body as a natural symbol with which to think about nature, society, and culture" (Lock and Scheper-Hughs 1990:50); and the body-politic refers to the regulation, surveillance, and control of individual and collective bodies. "The relationships between individual and social bodies concern more than the metaphors and collective representations of the natural and the cultural. They are also about power and control" (Lock and Scheper-Hughs 1990:65). A community that perceives itself to be threatened often responds by implementing social controls to regulate the group's boundaries: "[t]he body politic under threat of attack is cast as vulnerable, leading to purges of traitors and social deviants...Threats to the continued existence of the social group may be real or imaginary" (Lock and Scheper-Hughs 1990:65).

Foucault's biopower can be applied to the idea that political technology allows for the control of populations through discipline and regulation of the body. Notions of biopower readily compliment the body-politic level of analysis. Biopower emphasizes the protection of life rather

than threat of death, and helps facilitate the management of collective life. Individuals who are perceived to be threats to this life are the ones most subject to the rationalized application of biopower. These concepts can be readily applied to a historical gaze into the asylum. Power can fragment a society in a way that dehumanizes part of the population and makes their deaths justified for the greater good (Rabinow 2003). This control of individual or collective bodies can be based on real or imaginary criteria; ideas of which shift with changing social values.

Terminology

The terms "insane," "insanity," "lunatic," "mad," and "madness" will be used throughout this paper. They denote historical ideas that do not have exact analogies in the present, and so must be described as they were previously used. In general, "madness" historically denoted "wildness, lack of restraint by reason, and loss of emotional control" (Gamwell and Tomes 1995:9). Insanity was a more general term, associated with uncleanliness or unhealthiness. "Lunatic" was a legally determined state, originally derived from phases of the moon. These terms are separate but overlapping notions that were often used interchangeably, both in past literature and in this paper.

Assumptions and Biases

Certain assumptions underlie this research. Mental illness is taken to be a real phenomenon for which biology, culture, and personal experience shape the individual; and for which the treatment of those considered ill is based on culturally informed perceptions and ideas about the illness, the ill individual, social problems, and social conceptions of health and illness.

In the United States, mental illness is highly medicalized. Control is often attempted through medicine and behavioral therapy. These culturally construed notions of mental illness are the context in which I am deeply imbedded. Through deconstruction of these ideas, I hope to better understand the history of these social perceptions.

History of Insanity and the Asylum

In the seventeenth and eighteenth century, the mentally ill were cared for at home by their families (Grob 1994; Scull 1977). Mental illness was viewed as an individual rather than a social problem, although the community would sometimes contribute economic resources to affected families (Grob 1994:6). Perceived community obligations toward the poor and dependant were supported by early colonial laws in the United States (Grob 1994:7). There was a generalized view of illness that did not often separate the mind and body, and health was considered to be the absence of illness. Early medical treatments were rare, but were based on humoral conceptions of the body and the related traditions of bleeding and purging. Spiritual treatments like the exorcism of supernatural forces were also employed. There was a shift during the eighteenth century from believing that mental illness was caused by spirits and humoral imbalances to a more individually placed responsibility for illness. Mental and physical illnesses were thought to result from moral excess (Grob 1994:11). As such, relationships between the mind and body; individual and environment; and emotions and physiological processes became the focus of study for the medical profession.

Institutionalization

Institutionalization of the insane began in the early eighteenth century. Population growth and the resulting increase in dependant individuals necessitated a more adequate system of care than the community-based informal care could provide. Almshouses emerged in larger towns to house the elderly, mentally ill, orphans, and other poor families and individuals viewed as dependent on society. Hospitals later cared for the insane, under the hope that proper treatment could cure insanity and restore individuals back to health (Grob 1994:19).

In Europe, institutionalization was integral to this treatment, and it was thought by many that the will of the individual should be broken into submission. Through physical confinement in chains, the mad were dehumanized and brutalized (Foucault 1965; Grob 1994). Two significant events occurred in France to re-humanize the mad: the liberation of insane inmates from chains and the implementation of the hospital to house them (Foucault 1965; Grob 1994). These actions have been attributed to Pinel, who advocated kind treatment of the mad. The madman, previously viewed as animalistic, was now thought to be human - albeit defective (Scull 1977:344).

Hospitals were also established in the United States to care for the insane with kindness and humanity. "In 1773 the first American hospital devoted entirely to the confinement and care of mental patients was founded in Williamsburg, Virginia" (Gamwell and Tomes 1995:20), and by the second half of the nineteenth century, most states had at least one public institution to house the insane (Grob 1994). The Colorado State Insane Asylum at Pueblo was opened in 1879 (Stone 1918) and western U.S. asylums often emulated eastern ones in architecture, intent, and treatment. The relatively rapid spread of asylums throughout the United States illustrates the significance of insanity as a perceived social problem. During this time,

some forms of insanity were still thought to be curable, and asylum programs sought both to rehabilitate the curable and to create a tolerable environment for long-term care of the chronic cases (Morel and Henderson 1899). A daily regimen included activities, religious services, and guest speakers. Asylum wards were based on a system that restricted violent or especially abhorrent patients while granting rewards and decreased restrictions to those who improved. Moral therapy was administered by the asylum physician and staff to facilitate rehabilitation, although even chronic states were subjected to this treatment to give comfort and humanity to the incurable individual.

The emerging field of psychiatry affected institutionalization because "the institution was, of course, the almost exclusive arena in which the new profession applied its trade. The structure of moral treatment was such that the asylum was also perceived by alienists [asylum superintendents] as one of their crucial therapeutic instruments; that is, the asylum itself was a major weapon (perhaps *the* major weapon) in the struggle to cure the insane" (Scull 1981:9).

Insanity and Treatment

European and American notions of insanity and treatment were closely aligned during the nineteenth century (Gamwell and Tomes 1995:46). The body was viewed as a machine that could be defective (Scull 1977) or potentially "driven beyond its capacity" (Sicherman 1981:221). However, madness and insanity were thought to be treatable and reversible. Post-Enlightenment ideals held throughout Europe and the United States contributed to the notion that "rational thought" could be restored to these individuals. The promotion of recovery occurred through behavioral and moral therapy, which included attempts to

get the individual to internalize normative societal values. A widely held view was that an untreated acute condition could turn into an irreversible chronic one over time (Curtis 1893; Grob 1994:32).

Treatment was based on social conceptions of morality and conformity (Clausen and Huffine 1975), and restoring rationality (Scull 1977). However, the ideology of the asylum often contrasted starkly to the reality. The relationships between patients and staff or physicians actually dictated daily operations (Grob 1994). There was often a refusal on the part of the patient to conform to established behavioral norms. Although most English physicians were discounting the use of restraints, many American physicians continued with their use. This was culturally justified by American doctors, who "claimed that their patients were more difficult to control than their English counterparts; as the citizens of a republic, Americans simply did not obey orders as meekly as did the British" (Gamwell and Tomes 1995:46). "Patients lived in an atmosphere in which personal liberty was constrained and behavior regulated" (Grob 1994:82). Additionally, the refusal of the patient to conform was often seen as intentional defiance or stubbornness on the part of the patient. Clifford Beers (1908:46) argues differently:

> When one possessed of the power of recognizing his own errors continues to hold an unreasonable belief – that is stubbornness. But for a man bereft of reason to adhere to an idea which to him seems absolutely correct and true…that is not stubbornness. It is a symptom of his disease, and merits the indulgence of forbearance.

Rather than patience, violence and brutality were often exhibited by the staff (Beers 1908; Curtis 1893). An individual perspective can stand in grim contrast to the cultural perceptions that advocated compassionate

treatment to rehabilitate the mad. Beers (1908) outlines the violence and general neglect he experienced in the years he spent confined to both public and private asylums in Connecticut during the very beginning of the twentieth century. He was deemed a neurasthenic before his breakdown, and attempted suicide by jumping out of a window. He accomplished only the breaking of bones in his feet. When he was committed to an asylum by his concerned family, he began experiencing delusions almost immediately. He also experienced injustice in what he saw as symbolic degradation. Beers reported being humiliated as his legs were shaved in preparation for casts (he associated this treatment with murderers and barbarians), and he perceived the plaster strips over a scratch on his forehead as an intentional mark of infamy. More humiliating than these experiences was his later experience with a camisole (a type of straightjacket). By the time he was subjected to this, Beers was no longer delusional and believed himself rational. He was exhibiting defiance in the hopes of further uncovering the injustices that he believed were present and needed to experience firsthand for his planned exposé of asylum treatment. The camisole was excruciatingly painful and Beers reported screaming and moaning from the pain, begging for it to be loosened. The perception of the moaning mad person, who necessitated restraint, is contrasted here with ignorance of the fact that the restraint itself may have caused the behavior that was subsequently viewed to be proof of insanity. Clifford Beers spent time in asylums during the early part of the twentieth century, but his experience gives perspective to perceptions of the insane in the nineteenth century, as there was not a hard boundary between these years in social notions regarding the insane.

Cultural Influences

Throughout the mid- to late- nineteenth century, medical perceptions of the causes of insanity included contrasting viewpoints of religion and science (Porter 2002). Although morality still played a role in insanity, madness was increasingly thought to be the result of lesions on the brain (Grob 1994:58). These lesions impaired the brain and other sensory organs, and created an imbalance in the individual. The individual's personality predispositions were also influenced by his or her psychological and social environment. Immoral behaviors that went against natural laws of humanity were thought to provoke the development of mental illness in an individual. Thus, both science and morality contributed to the medicalization of insanity.

Excessive passion was also intimately linked to insanity (Foucault 1965). This passion could manifest itself in excessive alcohol use, overwork, unrealistic ambitions, religious zeal, and a number of other symptoms not regulated by an individual's self-control. There was a definite emphasis on the culturally valued trait of self-control, including constraint over one's emotions and moderation in all things (Sicherman 1981). Conformity to social norms was viewed as adequate moderation. Conversely, any deviance from these social norms was discouraged, as those who were not viewed to be calm and in control of themselves and their emotions were also viewed as unhealthy. The insane were thought to lack this necessary self-control (Sicherman 1981).

Neurasthenia was a clinical term for a nervous breakdown that assaulted the elite, resulting from the demands of civilization and intense stress associated with overwork (Porter 2002). Although it is discussed elsewhere, it was largely thought to be an American disease

(Sicherman 1981:220), and was prevalent in the late nineteenth century. In response to this disease, Americans were further urged to moderate "their ambition, their love of money, and…their compulsion to work" (Sicherman 1981:221). This advice referred specifically to intellectual strain rather than to physical labor. In addition to overwork, idleness was also cause for concern.

Although society and civilization were acknowledged to provoke insanity, ultimately it was thought to be ultimately caused by either physical or moral behavior. Physical behaviors, such as head injury and epilepsy, were not preventable and therefore not subject to moral judgment. Moral causes of insanity, however, were preventable. Immoral behavior such as intemperance, masturbation, overwork, domestic difficulties, disappointments, and excessive religious enthusiasm were the fault of the individual. Even though an individual may have exhibited a variety of behaviors, he or she was most likely classified by the family's assertion of the cause of insanity (Grob 1994:61). Indeed, individuals were typically committed to asylums by their families. Usually, violence or threats of violence by an individual, or death of a primary caretaker, influenced a family to commit someone (Grob 1994). Unless legally committed by a court, the patient was required to sign a "voluntary commitment" form upon arrival (Beers 1908).

The medicalization of insanity occurred during the nineteenth century and continued into the twentieth. Health was viewed as the absence of illness, including the lack of incapacitating symptoms and a resistance to stress (Sicherman 1981:220). Clinical definitions of insanity included references to a disease of the brain or nervous system. These diseases could possibly weaken and even destroy self-control (Battle 1913). This medicalization was more than a product of the somewhat ambiguous social

ideas about science. It was also the result of the emerging psychiatric field, and the desire of asylum doctors to affirm this field as an objective physical science. They sought to assert "their privileged access to such knowledge" and attain a "truth status" (Scull 1981:26). This desire for scientific objectivity was juxtaposed with notions of moral responsibility on the part of the patient. Scientific legitimacy in the classification of deviance allowed previously vague cultural notions of madness to be viewed as medically defined categories (Scull 1977). As a disease, insanity legitimized the scientific objectivity of the medical profession (Scull 1977). Darwinism and scientific positivism heavily influenced this desire of the late nineteenth century to establish psychiatry as a hard biomedical science (Porter 2002). Social concerns surrounding population growth, depression, unemployment, widening class distinctions, and immigration of minority ethnic groups (Grob 1994:40) also influenced the development of the asylum during the nineteenth century.

Popular and medical opinions often differed in their perceptions of insanity. Although physicians increasingly medicalized symptoms of insanity through their desire to ground their profession in science, popular notions still credited immoral behavior with inducing insanity. In the asylum, a careful balance of religion and science was thus attempted, as "[n]o asylum superintendent wanted to be considered an atheist in an era when a properly restrained religiosity was a requisite of respectability" (Gamwell and Tomes 1995:50).

Chronic insanity increased over the years and hospitals began dealing with their chronic insane by "discharging those who failed to improve or recover" (Grob 1994:105). However, the percentage of chronic cases still increased drastically, as did the aging population inside the asylum (Alzheimer's, senile dementia, and depression are

the modern equivalents to individuals suffering from "aging"). This increase in the aging of a society-dependant population coincided with the decrease of almshouses. The reality of the irreversible condition of the aging contrasted with previous notions of interceptive treatment for reversible conditions. Additionally, conditions other than aging contributed to the rise of chronic insanity, for example typhoid fever and syphilis.

The shift to a prevalence of chronic insanity initiated significant changes in the way mental hospitals were conceived of and run (Grob 1994:127). The morale of asylum physicians and staff decreased as they dealt more with custodial rather than rehabilitative duties. Public perceptions of asylums also suffered, as they were no longer viewed in a positive light. They became symbols of hopelessness, abuse, and death rather than hope. The stigma of institutionalization was attached not only to the insane, but also to the family (Beers 1908), as heredity became an increasingly accepted cause of insanity. Stigmatizing distinguishes Self from Other and it has been suggested that "setting the sick apart sustains the fantasy that we are whole" (Porter 2002:63).

In the late nineteenth century, sedatives were increasingly used over personal therapy (Porter 2002:120). It has also been suggested (Scull 1977:345) that a shift in perceptions of insanity occurred with this increase in treatment as management rather than rehabilitation. Heredity was increasingly viewed as the origin of insanity, and this both mirrored and influenced prevalent notions of social Darwinism (Gamwell and Tomes 1995:124). In this way, the brain was linked intimately with society through metaphors of progress and degeneration.

Eugenic sentiments, which had been pervasive throughout this era, exceedingly emerged during the latter portion of the nineteenth century. Medical professionals

shared a belief that "modern science would soon conquer the scourges of mankind, including insanity" (Sicherman 1981:218). This, along with the notion that insanity was hereditary, led eugenicists to advocate the confinement and sterilization of the insane as early as 1900 (Porter 2002:152).

Although the exact etiologies of insanity shifted over the course of the nineteenth century, basic personality types were recognized as static. The facial expression and overall appearance of the patient were thought to be indicative of their affliction. This diagnostic method was integral to both humoral and phrenology traditions. This concept was further shaped to fit both eugenic ideas and attempts to secularize the study of insanity and gain scientific acceptance for psychiatry. Descriptions accompanied sketches or photographs in diagnostic manuals.

> When derangement was manifested as excitement and marked delusions, and the patient's face appeared vibrant and lively, the illness was termed mania. A nervous temperament and a downcast expression coupled with extreme dejection and passivity signaled melancholia. Patients suffering from mania or melancholia sometimes deteriorated even further into dementia, an unresponsive state in which the face was empty of expression. [Gamwell and Tomes 1995:71]

Mania, melancholia, and dementia.
Adapted from Gamwell and Tomes 1995:75 (originally from Hamilton 1883)

Historic Literature

Literature from the late eighteenth century confers the notion that some forms of insanity could be treated and even prevented. Conditions were typically thought of as either acute or chronic, and heredity was especially to blame for many mental illnesses. Morel and Henderson (1899) exhibited a special concern for preventing insanity. Although they use the word "illness" it is apparent that they viewed madness and insanity as biological diseases.

As outlined in Morel and Henderson (1899), it was considered the individual's responsibility to society to know about the behavioral predispositions that he or she might possess and pass on to children. Responsibility was also placed upon the government to combat insanity-inducing heredity. Additionally, the state was viewed as responsible for confining the mad and placing them into asylum treatment programs to learn acceptable habits. This held true especially for alcoholics, who were feared and abhorred by society as degenerates.

Teachers were urged to recognize students that were not as mentally developed as their peers and to provide special treatment for them (Morel and Henderson 1899). The teacher needed to be understanding of the condition

and try to "awaken" abilities in the child that were not being expressed. A harsh teacher was thought to only discourage the child. All nervous people were seen as needing to be guided throughout their lives, to dissuade insanity. The family, physician, and teachers were all thought necessary to prevent insanity in nervous people. High demands on the intellect of nervous individuals were also thought to lead to later disappointment and degeneration, as previously discussed.

Issues that were viewed as pressing social problems influenced perceptions of insanity. It was thought that many controllable, immoral behaviors could lead to physical and mental illness, including insanity or death. Emphasis was placed on eradicating the social problems of drunkenness, masturbation, and excessive religious education; which were thought to be leading causes of insanity. Confinement was a response to these social problems, in order to protect society from the insane and their unpredictable behaviors. Madness was socially deviant and a worrisome problem that needed to be solved and the asylum appeared to provide this solution (Scull 1977). In fact, the integration of the asylum into society illustrates the prevalence of insanity as a social problem (rather than a collection of isolated cases), and the separation of insanity from other forms of social deviancy like poverty (Scull 1977). The idea that mental illness was increasing every year was linked to social issues like alcohol use and an overall increase in mental activity that was believed to result from competition in the workforce (Curtis 1893).

Intemperance, or excessive and chronic drunkenness, was thought to be one of the leading causes of insanity, immorality, and degeneration of society. Two suggestions to reduce alcoholism were individual counseling and coercive means such as confining and

treating the individual. Women were viewed as positive and nurturing forces that could dissuade alcohol use within their families. Asylum physicians and staff were also encouraged to refrain from drinking anything but water to set an example. Absolute abstinence from alcohol was thought to be the only cure for alcoholism (Morel and Henderson 1899). The use of alcohol was thought to provoke a hereditary predisposition to insanity (Curtis 1893; Morel and Henderson 1899). This social problem was thought to perpetuate degenerative behavior and ultimately the degeneration of society. It was especially thought prevalent among poor lunatics (Porter 2002:149).

Religious excitement was often characterized by divine delusions in which an individual believed him or herself to be a saint or spirit; or believed that he or she talked to God, saints, or spirits. This was often thought to be provoked by excessive religious education, and moderation was encouraged. These delusions were believed to be caused by a disruption of the nervous system, and could be treated through awakening an individual by making him or her realize the irrational behavior, and training him or her to exhibit more acceptable behavior (Morel and Henderson 1899).

Masturbation was another social concern, as it was thought to lead to physical and moral degeneration. It was also thought to be contagious and needed to be controlled through social coercion strongly discouraging it.

Cultural Biases

During the nineteenth century, women were seen to have a "heightened susceptibility to emotional disorder and mental disease" (Scull 1981:24). Women were, essentially, slaves to their bodies (Porter 2002). The overwork that affected men during this era affected women as well, only more so.

It was even suggested that women should not strain their mental capacities with work, and instead be content with marriage and motherhood, lest they jeopardize their "future womanly usefulness" (Sicherman 1981:223). Perhaps the emphasis on the higher susceptibility of women to mental illness (and therefore their need to stay calm and not strain their mental capacities) can be viewed as a method of reinforcing Victorian gender roles during a time when women's suffrage efforts were threatening their "place in the home."

Any female malady not found to have a physical cause was determined to have an emotional one, and masturbation, promiscuity, nymphomania were thought of as possible results (Sheehan 1997:328). During this time, medical and emotional problems of women were attributed to a malfunctioning of their reproductive organs, specifically their ovaries (Gamwell and Tomes 1995; Sheehan 1997).

In addition to gender, conceptions of class and race also influenced the treatment of the insane. Members of the elite classes were encouraged to read and play games; poor and laboring classes were assigned work around the asylum. During and after the Antebellum, black patients were often not accepted to asylums, or were discreetly accepted and then segregated and given differential treatment (Gamwell and Tomes 1995:56-59). Additionally, Irish immigrants and Native Americans were also treated inferiorly. Cultural biases towards certain races and classes influenced the notions that inferior patients should not be mixed with the "better class" of patients. Physical barriers were used to enforce these seemingly moral divisions of patient populations (Scull 1981:10). These included separate sleeping quarters and activity areas.

Passion and Reason

The real and unreal are part of the Cartesian dichotomy embraced by science (Lock and Scheper-Hughs 1990). Additionally, natural and super natural; normal and abnormal can also be seen in our perceptions of the body. The insane are often thought to dwell in the unreal, abnormal, and even supernatural realm. Passion and reason is another conceptual opposition (Foucault 1965; Lock and Scheper-Hughs 1990): "[t]he savage danger of madness is related to the danger of the passions and to their fatal concatenation" (Foucault 1965:85).

Foucault (1965) suggested that the mad were classified as such because they allowed themselves to believe that what they imagined was real. A rational person could still posses a strong imagination, as long as he or she acknowledged that the ideas were not real. Reason and rationality were characteristics that set the sane apart from the insane. The insane were viewed as so because of the perceived inability of sane people to reason with them (Curtis 1893:189). However, Beers (1908) argues that an insane person is capable of reasonable deductions, although these might be based upon unreasonable assumptions. Indeed, Foucault (1965) suggests that the "mad" became the mad because they were confined and denied the forum to speak by the "reasonable," who instead spoke for them. This direct application of biopower illustrates the involvement of the body-politic on individual and social bodies, as the mad were physically and conceptually segregated from the majority population.

Colorado State Insane Asylum

Previous to the opening of the State Insane Asylum in 1879, the insane were held in jails and private hospitals in

Colorado, as well as at out-of-state hospitals (Stone 1918). The increasing population of Colorado, and subsequent increase of the population in the asylum, necessitated expansion. By 1900, eighty acres still wasn't enough land to house the insane, as an estimated two-hundred prospective patients waited for admittance in the Denver medical hospital, a private sanitarium, and to a lesser extent in county jails and courthouses (Stone 1918:822).

During 1879-1899, Dr. P.R. Thombs was the superintendent of this asylum (Stone 1918). The year that Dr. Thombs retired, the Board of Lunacy Commissioners was replaced by the Commissioners of the Colorado Insane Asylum. Although the details of this change are not known, it has been suggested that a new style of micro-management commenced in the asylum to deal with what had been seen by the Board as mismanagement under Dr. Thombs (Miller 2006). Asylums, treatments, and theories of the insane in the western United States emulated those in the east, so this shift in management may be a result of the larger picture as asylums everywhere became more structured and coercive over time in response to the growing population inside them (Grob 1994:91).

Additionally, the integration of "cottage style" housing at the Colorado asylum during the end of the nineteenth century fit with the prevailing idea that this type of housing was cheaper and more intimate than large and linear institutional housing (Gamwell and Tomes 1995:122). This "cottage style" housing was also part of larger reforms in the American mental health care sector occurring around the turn of the century.

Asylum Admittance Records

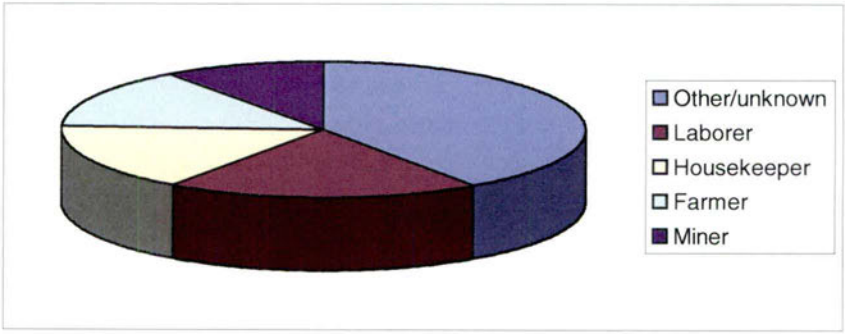
To compliment the literature review used in this paper, the admittance records from the Colorado State Insane Asylum

in Pueblo from 1879 to 1899 were examined. A database consisting of 1939 admittance entries provided a large sample for analysis. Included in this database are names, admittance dates, ages, county of origin, ethnic origin, symptoms, diagnoses, and comments. Symptoms exhibited, which can also be thought of as the perceived cause of the insanity, were described in the database as "cause presented." In some cases there was more than one symptom listed for this, and the individual was classified by the first symptom listed. Diagnoses of patients were described under the heading "form of insanity."

Data from the admittance records were analyzed in an attempt to locate the most represented social class as determined by occupation, possible gender differences, and a description of the symptoms exhibited. Although these methods are sufficient for this paper, it would be interesting to further explore age, as well as temporal variations in symptoms and diagnoses.

This analysis revealed that occupation was varied, although most individuals admitted were from the laboring classes (Figure 1). General laborers (nineteen percent), housekeepers (sixteen percent), farmers (fourteen percent) and miners (ten percent) accounted for about half of the population inside the asylum. Other occupations represented included saloonkeepers, carpenters, clerks, gamblers, servants, miners, herders, cooks, merchants, printers, bookkeepers, farmers, domestics, school teachers, and blacksmiths. There were few occupations represented that were indicative of a higher class, for example there were only five lawyers admitted in these twenty years. This predominantly working-class population is representative of the general populace of the West, and specifically Colorado, at this time.

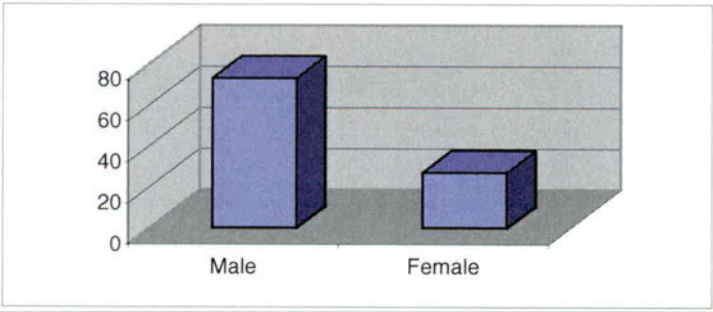
Figure 1
Occupation as determined upon admittance to the
Colorado State Insane Asylum between 1879 and 1899



In addition to occupation, age was also highly varied. The youngest individual admitted during this time period was seven years old and the oldest was ninety. Age is something that should be further explored, as perceived symptoms and diagnoses may be influenced by a patient's age.

Grob (1994:82) reported that institutions were typically comprised of about half males and half females. However, in this sample of the Colorado Insane Asylum, seventy-three percent were men and twenty-seven percent were women (Figure 2).

Figure 2
Gender of those individuals admitted
to Colorado State Insane Asylum between 1879 and 1899



When "cause presented" was broken down by gender (Appendices I and II), there were some obvious differences based upon reproductive capabilities. A small percentage of women had the descriptors of abortion, childbirth, ovarian disease, puerperal (post-partum infection/fever), uterine disease, and 2nd climacteric (similar to menopause) listed. However, even in seemingly more gender-neutral categories, there were noticeable differences between males and females (Figure 3). Domestic trouble was more likely to be listed as a female "cause," while males were more likely than females to have both intemperance and syphilis listed. It is intriguing to note that domestic trouble appears to have been attributed to more female than male patients, and it would be interesting to know what was considered "domestic trouble" during this time. Intemperance as a male-dominated condition would also prove to be a fascinating topic. Heredity and ill health were other leading causes of admittance to the asylum, although they were relatively similarly reported between males and females. Many people were also admitted due to "unknown causes." It would be interesting to know if this was because the "cause" of insanity was a mystery, or if the "symptoms" were perhaps too numerous or complicated to expound. Although further literature review might provide some insights to these questions, the personal narratives of these patients and their perceived causes of insanity may never be known.

Figure 3

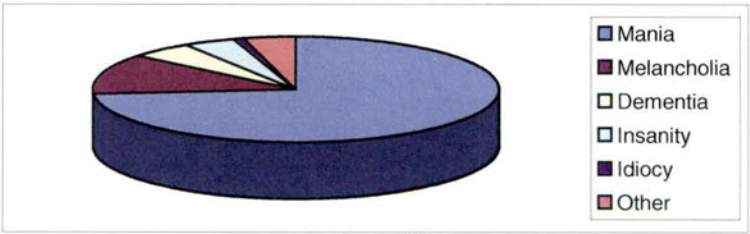
"Cause presented" by gender

"Cause Presented"	Females (Count)	% of Females	Males (Count)	% of Males
2nd climacteric	52	9.89	0	0
domestic trouble	41	7.79	17	1.20
heredity	88	16.73	186	13.16
ill health	32	6.08	80	5.66
intemperance	13	2.47	265	18.75
syphilis	20	3.80	116	8.21
unknown causes	80	15.21	205	14.51

The four most predominate diagnoses in these admission records are mania, dementia, melancholia, and insanity (Figure 4). This correlates somewhat with the earliest established categories of mania, monomania, melancholia, dementia, and idiocy (Grob 1994:59). There were descriptors with many of these, including but not limited to acute, sub-acute, chronic, epileptic, and paralytic. It is not currently known how these diagnoses were determined in the Colorado asylum. However, it is interesting to note that the diagnoses are parallel to those found in the literature from this time.

Figure 4

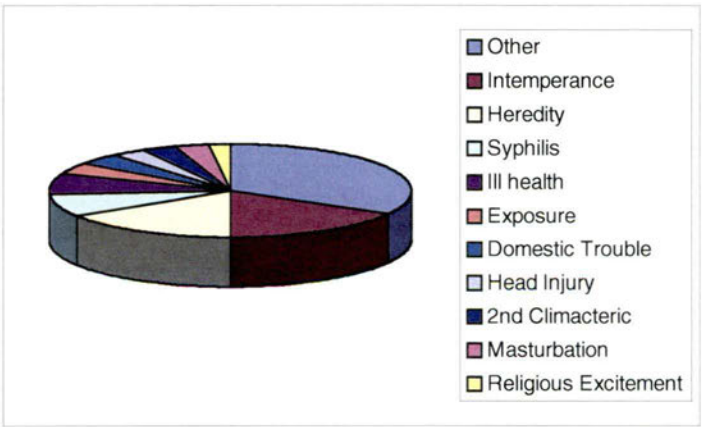
Diagnoses ("type of insanity") as determined upon admittance to Colorado State Insane Asylum between 1879 and 1899



The "cause" for admittance, according to the literature on the topic, was communicated to the asylum by the family of the insane. It is important to remember that individuals probably exhibited multiple behaviors that influenced their admittance to the asylum, although not all of these symptoms are listed in the records. Of those patients that had a specific cause listed, intemperance and heredity were the most frequent. This was followed by syphilis, ill health, exposure, domestic trouble, injury to the head, 2nd climacteric (associated with menopause or age), masturbation, and religious excitement. The remaining causes constituted a third of the total percentage, illustrating the wide variety of behaviors and experiences perceived to cause insanity (see Figure 5).

Figure 5

Causes of insanity ("cause presented") as determined upon admittance to Colorado State Insane Asylum between 1879 and 1899



Analysis

European and American conceptions of insanity usually paralleled each other, although there were some differing notions of treatment such as the use of restraints. Many prevailing social concerns of the eastern United States could also be seen in the diagnoses of individuals in the western U.S. Intemperance and heredity, two of the largest social concerns of this time period, were also oft-cited symptoms of individuals admitted to the Colorado Insane Asylum. Mania, melancholia, dementia, general insanity, and idiocy were all found in the diagnoses of the Colorado individuals. This correlates with the dominant diagnoses in the United States. Neurasthenia, although a common nervous disease elsewhere in the U.S. during the late nineteenth century, was found in only one person (male) at the Colorado Insane Asylum. As previously discussed, neurasthenia was viewed as a disease of the elite, who were susceptible to overworking their intellectual capacities. Perhaps because of the drastically different lifestyle of the West, and the pervasiveness of hard labor including mining, farming, and livestock raising in Colorado specifically, this disease was not thought to be present in this area during this time.

The diagnoses of patients at this asylum reflected the larger social concerns of the United States during the nineteenth century. They are expressive of these social issues and also of conceptions of health, illness, rationality, normality and deviance. The presence of syphilis and typhomania reveal era-specific sicknesses, but also may have been influenced by social perceptions of either symptoms or causes of insanity. The admittance of many patients (mostly male) for intemperance illuminates the significance of this behavior as a major social problem.

Conclusion

> Although mental hygienists believed that their advice conformed to scientific canons, their conception of health reveals more about their own values, and particularly their fears, than about the nature of health...From their clinical observations of patients who had failed to meet life's demands, physicians drew conclusions about the ills of society as well as the personal weaknesses of the victims. [Sicherman 1981:218]

It is not necessarily the disease that has changed throughout time, but rather the conception of disease that has changed (Turner 2000). These concepts are not universal, and there is rarely agreement as to what constitutes health or illness/disease. Theories surrounding health and illness are shaped by culture according to the dominant belief system, especially when assigning blame or praise for illness or health (Turner 2000). During the nineteenth century, "[m]uch of medical thought reflected a particular understanding of the natural laws that governed the universe. Health and illness were simply indicators of the degree to which individuals conformed to or deviated from such laws" (Grob 1981:44).

Physical health has often been historically associated with moral health, or morality in general (Turner 2000). With increased modernization and secularization of societies, scientific explanations of illness causation surfaced. "Social reality" is not static, although "concepts of health and well-being become inextricably connected to fundamental notions of self-identity" (Turner 2000:21). In non-Western cultures, multiple selves can be experienced by one individual without a pathological explanation applied (Lock and Scheper-Hughs 1990:59).

Historically, the body as a machine has been a pervasive metaphor for viewing the body as defective but repairable, and these conceptions were applied in the treatment of the insane. The regulation of the body in asylums, and attempted behavioral manipulation illustrates biopower, and the influence of the body-politic. Social

conceptions dictated rationality as a sign of a healthy person who did not deviate from social norms. Conversely, deviance was viewed as irrational and a potential sign of insanity.

Medicalization of insanity increased during the late nineteenth century, as psychiatry was emerging as a discipline. The desire for scientific acceptance drove many physicians and psychiatrists to emphasize biological causes of insanity. Social problems such as alcohol use, masturbation, and overwork were viewed as causes of insanity. Metaphors aligning the body and society involved notions of progress and degeneration in both.

Perceptions of insanity historically influenced not only the treatment that the mentally ill received, but also the determinations of who was actually deemed "insane." This is a relevant issue today - a time with an exceedingly high number of individuals who are currently diagnosed with a mental disorder that prevents their economic self-sufficiency and ability to cope with every day life (Grob 1994). There are many current debates regarding the benefits and detriments of institutionalization of the mentally ill. Without institutionalization, many mentally ill individuals end up homeless, incarcerated, or prematurely dead. However, the medicalization of symptoms can result in misdiagnoses, mistreatments, and institutionalization. Institutionalization often provides an all-too-convenient cache for those individuals that society would rather not deal with. Understanding the history of the asylum and both the popular and educated ideas that have informed past treatment can create a better understanding of how the insane are treated today, how society believes they *should* be treated, and what types of policies should be implemented to ensure humane and effective treatment of our mentally ill individuals.

As Good (1994) notes, issues larger than the individual body must be examined to achieve a holistic understanding of illness and disease causation and perception. Society and culture are not static backdrops in which individuals live, but rather interactive elements of individual and group lives. Insanity is culturally constructed and shaped around current social norms, including ideas of normality, rationality, and health. Rather than individuals or diseases changing over time, it is perceptions of these that change.

Appendix I (Females)

Females	Count	% of females
2nd climacteric	52	9.89
abortion	5	0.95
active congestion of the brain	0	0
age	2	0.38
anxiety	0	0
apoplexy	1	0.19
asthma	0	0
bright disease	0	0
bronchitis	1	0.19
business failure/losses/trouble	0	0
catarrh	0	0
cerebro spinal	1	0.19
cerebral congestion/embolism/hemorrhage	2	0.38
change of life	3	0.57
childbirth	14	2.66
chorea	1	0.19
confinement	0	0

congenital	4	0.76
consumption	5	0.95
diabetes	1	0.19
disappointment	5	0.95
disease of brain/kidneys/liver	2	0.38
disease of spine	1	0.19
dissipation	6	1.14
domestic trouble	41	7.79
dyspepsia	0	0
embolism	1	0.19
epilepsy	4	0.76
erysipelas	2	0.38
excessive use of mania	0	0
excessive use of tobacco	0	0
exhaustion	0	0
exposure	0	0
family trouble	2	0.38
fear/fright	5	0.95
feigned insanity	0	0
fever	4	0.76
financial trouble	0	0
general paresis	0	0
grief	2	0.38
heart disease	0	0
heredity	88	16.73
ill health	32	6.08
imprisonment	0	0
injury	1	0.19
injury to head	0	0
injury to spine	1	0.19

intemperance	13	2.47
insomnia	0	0
intense study	0	0
jealousy	3	0.57
La Grippe	0	0
lead poisoning	0	0
locomotive ataxia	0	0
loss of family/money/property	5	0.95
masturbation	2	0.38
measles	0	0
meningitis	2	0.38
menstrual irregularity/suppression	15	2.85
misfortune	1	0.19
mode of life and bad habits	1	0.19
morphine/cocaine/morphine habit	4	0.76
neurasthenia	1	0.19
nostalgia	3	0.57
old age	6	1.14
ovarian disease	5	0.95
overwork	1	0.19
paresis	0	0
phthisis	0	0
pneumonia	0	0
poverty	1	0.19
privation	5	0.95
puerperal	17	3.23
religious excitement	15	2.85
rheumatism	1	0.19
seduction	2	0.38
self abuse	0	0

senile decay	5	0.95
solitude	1	0.19
sunstroke	0	0
suppression	21	3.99
syphilis	20	3.8
trouble	1	0.19
tuberculosis	0	0
unknown	80	15.21
uterine disease	5	0.95
want	1	0.19
total	**526**	99.97

Appendix II (Males)

Males	**Count**	**% of males**
2nd climacteric	0	0
abortion	0	0
active congestion of the brain	4	0.28
age	3	0.21
anxiety	2	0.14
apoplexy	2	0.14
asthma	1	0.07
bright disease	4	0.28
bronchitis	1	0.07
business failure/losses/trouble	25	1.77
catarrh	1	0.07
cerebro spinal	1	0.07
cerebral congestion/embolism/hemorrhage	4	0.28
change of life	3	0.21
childbirth	0	0

chorea	2	0.14
confinement	1	0.07
congenital	11	0.78
consumption	5	0.35
diabetes	11	0.78
disappointment	7	0.5
disease of brain/kidneys/liver	11	0.78
disease of spine	10	0.7
dissipation	9	0.64
domestic trouble	17	1.2
dyspepsia	4	0.28
embolism	2	0.14
epilepsy	10	0.71
erysipelas	4	0.28
excessive use of mania	1	0.07
excessive use of tobacco	5	0.35
exhaustion	2	0.14
exposure	62	4.39
family trouble	4	0.28
fear/fright	2	0.14
feigned insanity	1	0.07
fever	16	1.13
financial trouble	9	0.64
general paresis	2	0.14
grief	0	0
heart disease	4	0.28
heredity	186	13.16
ill health	80	5.66
imprisonment	20	1.42
injury	6	0.42

injury to head	52	3.68
injury to spine	5	0.35
intemperance	265	18.75
insomnia	1	0.07
intense study	1	0.07
jealousy	0	0
La Grippe	1	0.07
lead poisoning	8	0.57
locomotive ataxia	2	0.14
loss of family/money/property	11	0.78
masturbation	50	3.54
measles	1	0.07
meningitis	7	0.5
menstrual irregularity/suppression	0	0
misfortune	0	0
mode of life and bad habits	0	0
morphine and/or cocaine habit	18	1.27
neurasthenia	0	0
nostalgia	5	0.35
old age	8	0.57
ovarian disease	0	0
overwork	21	1.49
paresis	3	0.21
phthisis	2	0.14
pneumonia	2	0.14
poverty	1	0.07
privation	3	0.21
puerperal	0	0
religious excitement	30	2.12
rheumatism	3	0.21

seduction	0	0
self abuse	4	0.28
senile decay	13	0.92
solitude	9	0.64
sunstroke	7	0.5
suppression	0	0
syphilis	116	8.21
trouble	0	0
tuberculosis	4	0.28
unknown	205	14.51
uterine disease	0	0
total	**1413**	99.94

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Indigenous Identity on the World Stage: The 'Mentawai' of Indonesia

N. Mason Cummings

Abstract- *Under the recent formation of a world market, local indigenous populations such as the 'Mentawai' are increasingly pressured to adjust their collective sense of identity according to the complex framework of a global community. Market-penetration has been highly variable in this region, in part due to the geographic dispersion of the 'Mentawaian' archipelago. Local articulations of indigenous identity are hardly present in the international discourse that tends to homogenize the area's great deal of cultural variation. This paper analyzes the various cultural forces of transforming and defining indigenous identity on the world stage, along with the emergence of ethnogenesis through the increasing interaction with outside groups.*

The process of cultural change has been drastically accelerated and even redirected under the recent formation of a world market. But in the case of the Mentawaian archipelago of Indonesia, market penetration has been anything but homogenous. Local identities and conceptions of social cohesion are constantly reshaped and transformed through the seemingly ubiquitous process of social change. When this process is imposed by outside forces, however, the contextual platform on which identity is conceived takes upon a whole new realm as the relationship between 'us and them' becomes even more complex. Yet while this inherent contrast between 'us and them' is a fundamental component in shaping cultural

identification, it is also imperative to understand that land use patterns are another inextricable component in the formation of social identity. Thus while land use patterns are transformed and redirected under the various pressures of political-economic (or even environmental) forces, so are local conceptions of identity. Indigenous identity has undergone drastic transformations through the process of globalization, and many groups in the Mentawaian archipelago (among a myriad of other locations) are virtually stuck in the constantly changing interaction between tradition and modernization.

As Reeves (1999:34) argues, "anthropological scholarship needs to take greater heed of the ways in with the local inhabitants construct their own identities." There is currently a great deal of discursive variation surrounding the collective notion of Mentawaian identity, yet local articulation is commonly an absent feature of this discourse. Here it seems as though outsiders' interpretations regarding local inhabitants frequently prevail over the interpretations which inhabitants hold of themselves (Reeves 1999). The notion of social identity in itself is entirely contextual, and identity cannot be adequately understood as a singular or discrete unit without reference to a broader social system. Here identity involves the explanations of who particular groups consider themselves to be through contrasting notions of 'selves' with 'others' (Reeves 1999). This concept of self-identification is oftentimes not the case in the context of globalization, however, as "localized identities, histories, and commitments have been consistently unmarked and derecognized in favor of homogenizing discourse of development" (Li 2000:174). On the world stage, indigenous peoples are demographically contrasted with, and often exploited by, a larger market core.

Ethnographic/Geographic Contexts

Traditionally, there is extremely little migration between various the islands and island groups of the Mentawaian archipelago, and the cultures show remarkable differences throughout the island chain (Pearson & Osseweijer 2002). This extensive geographic and cultural variation is greatly overlooked, however, when indigenous identification takes the stage of a broader colonial context. In this case, "the 'archipelago,' 'group,' or 'islands' on the one hand and 'its' inhabitants on the other are collapsed into each other creating a unitary 'thing'" (Reeves 1999:41). Yet local religious, cultural, and linguistic categorizations remain highly variable despite the apparent homogenization of indigenous identity on the world stage (Pearson & Osseweijer 2002). It is crucial to note here that there is not one single group that traditionally identifies themselves as 'Mentawai'. Rather, the term refers a gamut of geographically-dispersed indigenous groups that have been collectively labeled as a discrete social unit in contrast to Indonesia's central 'modernized' population.

Differential market penetration in many areas has pressured various indigenous groups to degrade their natural resources by redirecting subsistence patterns (Godoy et al. 2005). These trends of land tenure transformation, in turn, reshape social identity at the local level. While Holt (2005:206) argues that for many indigenous groups "the natural environment is inextricable from the social environment," redirecting subsistence towards the demands of a market economy could have significant effects on broader social realities. In addition to this basic transformation of local identities through changes in social-environmental relationships, indigenous communities are commonly identified as conservationists on the world stage (Li 2000; *see also:* Friere 2003; Holt 2005; Grunewald 2002; Anonymous 2006). The crucial effort to build international alliances encourages

many indigenous groups to convey a sort of 'noble conservationist' image, which may even conflict with some of their traditional cultural and subsistence practices. While this will be further discussed in subsequent paragraphs, here it is important to keep in mind that all of these basic transformational forces which act upon indigenous identity are highly variable within the geographically-dispersed context of Mentawaian groups.

The formation of an Indonesian state has had substantial ramifications on the collective concept of indigenous identity in the area. All of the various 'unmodernized' cultural groups assumed a combined identity as a subordinate transformation of the dominant Indonesian core (Reeves 1999). Again, despite this sense of collective identity as imposed by colonizing forces, social organization has remained highly variable. Moreover, the geographical variation that characterizes this region has also resulted in differential market penetration, and cultural identification has become subject to varying degrees of contact with Indonesians and the awareness of Indonesia as an institutional entity in a geopolitical context (Reeves 1999). Pearson & Osseweijer (2002:229) also explain that "small islands and their surrounding costal zones are usually far from centers of political power and the rules of regulation and enforcement are weak." Despite the great deal of the region's geographic and cultural variation, Indonesian independence has implied a process of cultural standardization which encourages everyone to take on an identity as an Indonesian citizen, and this has been especially concentrated on politically defenseless groups (Eindhoven 2002). All Indonesians are also required to profess one of the state supported religions: Islam, Hinduism, Christianity, or Buddhism (Anonymous 2006). Once again, however, many groups have been excluded from this process of standardization as a result of both geographical and political variables.

Political Economy

In the effort to properly articulate of indigenous identity, it is important to understand some of the fundamental political-economic processes of change that are currently at work on local, regional, and global levels. A common feature of these islands is that they are abundant in natural resources (Pearson & Osseweijer 2002), and the process of extracting these resources for a market economy may transform local patterns of social organization. Push factors such as landlessness, land tenure issues, and population increases often accelerate the intensity of rural-urban migration (Evers 1975). There are also a myriad of pull factors, however, such as expanded opportunities to earn monetary income, better nutrition and health care, and easier access to other basic resources and services (Godoy et al. 2005). It is clear, nonetheless, that many of these pulls to change are the result of preceding pushes. Evers (1975:778), for example, points out that push factors seem to be more central element of rural-urban migration and that "relatively few people are drawn into urban areas through job offers." Even indigenous groups with the advantage of geographic isolation are threatened by continuous economic encroachment, and eventual resource depletion may force them to surrender to progress (Bodely 1999). All of these forces have substantial effects on social organization, and the resulting changes in land tenure are foundational to the broader changes in social structure and cultural identification.

Many of the area's semi-nomadic indigenous groups are sedentarized by the effects of market penetration as subsistence production is redirected towards facilitating the needs of the growing Indonesian core. These processes can be empirically documented through the use of modern tools such as remote sensing, geographic information systems, and even indigenous mapping (*see:* Chambers 2006). The images produced by such technologies are visual representations of

things such as land tenure changes that, when properly assessed, can provide information about even broader processes of social and economic changes within a geospatial context. These technologies can also be useful in illustrating cultural variation in relation to subsistence practices as a product of geographical variation in the Mentawaian region. Whether used in an academic or applied approach, these technological innovations can indeed be part of the solution to some of the demographic problems caused by the process of globalization, yet those very same processes are the ones to support such technological innovations.

With the rise of these new communication technologies, the formation of international alliances has been a central element in shaping and articulating indigenous identity as local groups have become consciously concerned with the preservation of their culture (Eindhoven 2002). These international networks have the ability to "mobilize information strategically which enables [groups] to persuade, pressure, and gain leverage over much more powerful organizations and governments" (Eindhoven 2002:361). Significant increases in access to modern means of communication and the resulting international attention to 'indigenous peoples' had been the backbone of Mentawaian activism (Eindhoven 2002). Here again we see that that the products of globalization are both the reason for and potential solution to many social problems. While there is an inevitable catch-22 at work here, this does seem to be a basic example of how social capital can permeate new institutions (Godoy et al. 2005). Local articulations of identity are transformed through new processes of translation, but the local conceptions of traditional identity may be only slightly adjusted to changing sociopolitical contexts. This, however, is a rather idealistic notion. Culture is dynamic, and identity retranslated is essentially identity reformed, especially considering the myriad of potential change agents in the global context.

Many cultural practices and traditions must be compromised and reformulated in order to establish effective international networks. As previously stated, a large part of the indigenous effort to defend their cultural rights has been characterized by the adoption of conservationist arguments in order to establish allies on the world stage (Freire 2003). The effort to maintain a conservationist image becomes more difficult, however, as economic pressures accelerate resource allocation on different islands. Indigenous leaders have thus begun to emphasize this inherent threat to their environments in the process of establishing international connections.

> Activists draw upon the arguments, idioms, and images supplied by the international indigenous rights movement, especially the claim that indigenous peoples derive ecologically sound livelihoods from their ancestral lands and possess forms of knowledge which are unique and valuable. [Li 2000:155]

Many indigenous groups do indeed embody many of these basic ideals, but articulating them on the world-stage within the context of market penetration can clearly have impacts on conceptions of local identity. Eindhoven (2002:358) points out that many Mentawaian leaders "seem to have become masters of the art of translating their interests against state and corporate powers into the conceptual framework of Western ecology." An essentially unavoidable conflict of local interests results from this situation.

Local Identity and Enthogenesis

In considering social identity in terms of the relationship between 'us and them', the widened public sphere has also played a central role in shaping local conceptions of identity. Once again, the process of making connections involves the ability to readily articulate local identity to fit a broader preconfigured international image (Li 2000). While we have

seen that much international discourse of the Mentawai is characterized by the homogenization of cultural variation, local groups also seem to voluntarily assume this collective identity for themselves in pursuit of common interests (Li 2000). Thus they do, to some extent, consider themselves a cohesive culture in contrast to other politically dominant groups. These processes are framed by questions of authenticity and change, and it is often in the best interest of neighboring indigenous groups to cohesively adjust to changing sociopolitical contexts. By articulating a common environmental threat as a collective and unitary society, however, indigenous groups are inadvertently highlighting their primordial otherness from western society while simultaneously homogenizing their own distinct senses of cultural identity (Li 2000). This inherent juxtaposition between cultural revival and cultural reinvention has significant effects on the emergent ethnicity of indigenous groups.

The establishment of local NGOs has been one of the fundamental strategies in establishing international alliances, and they are a key to generating monetary support for activists. By presenting themselves as noble conservationists, indigenous groups also entice foreign donor organizations to make monetary contributions. "The founding of a local NGO has thus proved to be an easy way to make a living" (Eindhoven 2002:362). There tends to be an additional transformation of social identity, however, as individuals acquire new skills, attitudes, and values by participating in a market economy (Godoy et al. 2005), even in the case of NGOs. Moreover, NGO leaders are often torn between facilitating local needs and meeting the expectations of their western donors (Igoe 2003). Here we can see differential benefits within the context of change, and that local traditions are persistently in juxtaposition with external forces. Many activists are aware of these differential benefits, and are pressured to select certain issues from a broader social canvass in order to establish

regional and international alliances (Li 2000). While registered NGOs do seem to provide community leaders with a formal institution to coordinate local land movements on the international level, the broader institutional effects of these alliances are commonly overlooked (Igoe 2003).

Though many Mentawaian groups continue to display a great deal of cultural variation, the one issue that they all seem to have in common is coercive environmental degradation. As Holt (2005:208) explains, "the threat to the environment is external, not internal." So despite efforts to maintain a conservationist image, one of the most significant threats to social solidarity is still related to issues regarding land rights. Here yet another basic social paradox seems to be at work: a group's ability to maintain a conservationist image on the world stage becomes even more important as they are increasingly pressured towards urbanization and ecological degradation. The demarcation of land rights is a central element of social organization, and is thus crucial to understanding some of the fundamental processes of change. Moreover, Freire (2003:363) explains that "as land use changes, land rights change, and these are redefined according to the context in which they are discussed." In this case, land uses are often redefined according to an international context in the absence of local perspectives. Thus indigenous perspectives are eroded and reformulated while land uses and rights change under the differential pressures of the market economy.

In relation to this basic problem of property rights, Freire (2003:367) argues that "property is an expression of human relations, agreements and mutual understandings," and that "negotiations over land right have been characterized by a lack of real means of communication between the two [traditional and market] systems of property." An important element of this issue is the problem of translatability (Friere 2003), local subsistence practices may be incompatible with

those which characterize market production. In addition to this basic problem of land use and demarcation, monetary incentives must also be translated into compensation that is culturally appropriate to local frameworks. However, the case is generally that neither land demarcation nor monetary incentives are adequately translated to local contexts. Here we can see some of the more the tangible social effects on differential market penetration: some groups are geographically isolated enough to effectively resist these pressures and maintain autonomy, others are trapped between assimilation and equality, and some have become fully integrated into the market economy. Yet despite this great deal of variability, once again, all of these groups are collectively labeled as a discrete unit in contrast to the Indonesian core.

There is clearly a drastic transformation of 'traditional' lifeways in the process of adjusting to sociopolitical fluctuations in the global context. Local notions of social identity assume a widened public sphere, and indigenous perspectives must be adequately translated at the local level rather than universally reformulated on the international level. We are engaging in the act of representation when we talk about other cultures, and even this particular analysis is exclusively based on external perspectives. Local articulations of indigenous identity are hardly present in the international discourse that tends to homogenize the area's great deal of cultural variation. Thus there are clearly some empirical inadequacies with this sort of 'armchair anthropology' in the total absence of subjective experience. As Shweder (1991:76) points out, "we should not expect reality to be independent of our participation in it." Given what anthropologists now know of the ubiquity of change, however, it *is* possible to assess many of the complexities within the world-system in order to draw applicable conclusions to properly framed questions. We can better understand the adaptive capacity of indigenous groups within a political-economic framework (Thomas 2001),

but we must remain wary of the inevitable overgeneralizations in analyzing and describing such complex processes.

Conclusion

The process of globalization appears to increase inequality both among and between countries (Fort et al. 2004), but international discourse often acts to perpetuate these inequalities. Social identity is clearly a dynamic process, and the role of agency is another commonly overlooked element of change. Yet even agency is partially shaped by external factors, particularly socioeconomic variables with basic implications of land use transformation. In the context of globalization, indigenous identity has become "firmly interconnected with non-localized material realities involving the state and world-system" (Reeves 1999:49). In addition, social identity on the local scale is contextualized by particular shared struggles between different groups (Li 2000), and these struggles are often framed by the same non-localized realities of a world-system.

The basic question of 'us vs. them' is fundamental in constructing local conceptions of identity. Traditionally, Mentawaian cultures would differentiate themselves from neighboring groups based on geographic and organizational differences. Those regional differences, however, have become clouded by the augmenting sphere of socioeconomic variables. International discourse homogenizes the region's great cultural variation, yet local heterogeneous groups have also begun to voluntarily identify themselves as part of a larger cohesive whole in the pursuit of common interests within the context of globalization. So as social variability actually increases under differential market penetration, emergent ethnicity is uniformly valorized on the world stage and cultural distinctiveness becomes clouded. Moreover, indigenous groups are stuck in a catch-22 in their struggle to maintain

'conservationist' and 'traditional' images in the face of modernization. Here they adopt the ideas of change in order to resist the implications embodied by those ideas. Yet by adopting the preconfigured images of indigenous communities on the global scale, many groups are virtually stuck between development and tradition. The processes of globalization are extremely complex, to say the very least, and it is nearly impossible to properly assess all of the different variables in a single comprehensive analysis. Not only does change effect social groups in different ways, it also affects individuals in different ways.

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Synchronicity of Gender and Ethical Issues in Sustainable Development

Andrew Kumar

Abstract- *Sustainable Development is a deeply contested concept that has roots in the struggle between Capitalist and Communist ideologies during the Cold War. It has become a catch phrase that has been green washed and is used as justification for both progressive and neo-liberal policies of development across the globe. The basic definition provided in the Brundland Report is a good start, but is far from complete, based on issues of futurity and distribution in the present. Only by employing a strategy that takes gender perspectives and class issues into account may a more holistically functioning model be developed. By exploring the extant literature in the combined fields of ethics and development a clearer picture of the short comings of widely employed models may come into being, whilst illuminating more progressive possibilities. Understanding the historical basis of Sustainable Development as well as recognizing the flaws in the theory, indicators, and methods employed is an important first step in creating greater equity here in the present as well as the future. Combining this understanding with progressive ethical impetus and theory that is concerned with both equity and futurity may create a greater degree of flourishing through social justice across the global population.*

Gender and Ethical Issues in Sustainable Development

Sustainable development (SD) is a term that has multiple and sometimes contradictory meanings. Recent international development processes, and coverage by academics and policy makers have popularized the sweeping term, much like the concept of globalization. While the most widely held interpretation posited by the Brundlandt Report in 1987 is a good start there are still issues of gender disparity, as well as other ethical dilemmas that are not adequately accounted for. This is observable in the multitude of definitions, ethical issues concerning class and distribution, as well as the measuring tools that Intergovernmental Organizations (IGOs) and Non Governmental Organizations such as the World Bank and International Monetary Fund (IMF) employ to monitor the success or failure of development projects and their aim to preserve our ecology and people. This paper seeks to discuss some ethics involved in the definition, application, and measurement of Sustainable Development. The disparity that this application may sometimes lead to can be observed along structural lines such as gender or class. These two conceptions are closely related in the amount of suffering that is caused. Gender disparity is even more severe and debilitating when coupled with class disparity. By comparing several models of sustainable development in terms of class and gender disparity the links between these concepts can be illuminated suggesting the need to deal with them both together. A holistic approach such as this may lead to a greater degree of what Thomas Pogge calls "human flourishing" (2002). This view holds a holistic conception of what makes a healthy happy life at both the personal and community level. Pogge describes four major dimensions experience, success, character, and achievement as foundational in the facilitation of human flourishing in terms of

social justice, which by definition must address gender disparity. Generally this addresses development as a "preeminent requirement on all coercive institutional schemes… …[such that] they afford each human beings secure access o minimally adequate shares of basic freedoms and participation, of food, drink, clothing, shelter, education and health care (51:2002).

Similar ethical underpinnings of SD are highlighted in a number of documents compiled by both IGO's as well as NGOs. While the Universal Declaration of Human Rights set forth in 1948 by the United Nations deals specifically with class disparity in access to resources, rights, and benefits it does not overtly address gender disparity. This is observable in the very wording chosen in elaboration of the articles. For example, according to article 25 of the UDHR states, "[fulfill the rights to] a standard of living adequate for the health and well being of himself and of his family, including food, clothing, housing, and medical care" (1997). Here and elsewhere in this document the recognition of women's existence, let alone rights is obscured from definition and application.

The interconnectedness of gender issues and ethical issues in the sustainable development (SD) debate creates the need to address them holistically. One may not have an ethical form of sustainable development without addressing gender issues. Likewise, one may not have sustainable development in an ethical sense without including gender perspectives and issues. Due to the structural nature of development and the shortening of time and space in human interactions with both the human and non-human world, these issues become difficult to separate, and the need to address them together has become pronounced. Rekha Datta (associate professor of political science at Monmouth University) and Judith Kornberg (director of the School of Continuing Education and Professional Development at Purchase College, SUNY) add to

this, describing how SD in developing countries (areas) must include the perspectives and ideas of women: "because women continue to be the primary source of labor for household chores and raising children, development efforts that ignore conditions affecting women ought to be reassessed. Notions of sustainable development, therefore, ought to include the well-being and uplifting of women and men in the development process" (2002: 85). Since its codification of SD, disparity along the gender and class continuums has only increased leading to both polarization and a reduction of flourishing for humans. Howard Handleman recognizes these as effects of the modernization processes taking place in the Third World, that are often being described as development and sometimes sustainable. He agrees that women are more likely to suffer the short term effects of this economic focused growth, but believes that eventually development through the modernization provides the best hope for gender equality, a point which is in contention currently (2003).

A brief overview of ethical rights and their specific relationship to gender issues and perspectives will summarize connections and themes. Next will be an overview of successes and failures of the most widely adopted development model, as well as more progressive interpretations with some examples of more gender-equal development. It is important to note that the particulars of the current debate are part of the extremely important dialogue on development (and now SD) that must continue to include the perspectives and goals of those who have yet to gain a voice. Gita Sen (founding member of DAWN, the network of Third World women promoting Development Alternatives with Women for a New Era, from India) and Caren Grown (director of Poverty Reduction and Economic growth team at ICRGW: the International Center for Research on Women) emphasize this point, stating "respect for the many voices of our movement, for their cross-fertilizing potential, for the power of dialogue,

for the humility to learn from the experience of others are crucial to our vision" (1987: 96).

Policy makers, the international business community, and general public employ a conception of sustainable development was formalized in 1987 with the publication of *Our Common Future*, or the Brundtland Report. In this, SD is described as "...meeting the needs of the present generation without compromising the ability of future generations to meet their needs" (WCED 1987:8). Criticism for this definition comes from a wide variety of sources and is due to a number of factors, many of which address the ethical underpinnings and the inability of the aforementioned model to holistically account for issues of social justice and agency. These concerns have been formalized around a critique of free market capitalism as it applies to the development process, and the extraction of resources from the global south by the global north with highly inequitable compensation, and distribution of said compensation. Peggy Antrobus, a feminist scholar who is a founding member of DAWN discusses at the inability of agents at the global level to accurately address this issue:

> it should be abundantly clear by this time that the UN is unlikely to do the kind of sharp analysis and critique of the neo-liberal agenda that would give hope for change. Without an analysis that acknowledges the extent to which the power imbalance inherent in neo-liberal stands as an obstacle to the achievement of the laudable goals of the UN conferences, there is no basis for hope that these will be achieved. [Antrobus 2004: 116]

In this, the problems between the definition of SD and its implementation at the global level through the UN become apparent, and point to the need for a more holistic definition and application.

Philosopher Michael Jacobs (General Secretary of the Fabian Society) produces a comprehensive list of broadly scoped core ethical ideas that are involved in the sustainable

development dialogue. Some of these conceptions are included in the commonly accepted Brundtland definition of SD while others are included in more recent and progressive models. These ideas do address futurity and preservation of resource bases and rights along class lines but do not specifically address gender disparity.

1. "Environment-economy integration: ensuring that economic development and environmental protection are integrated in planning and implementation. [Accounted for by commonly accepted model]
2. Futurity: an explicit concern about the impact of current activity on future generations. [Accounted for by commonly accepted model]
3. Environmental protection: a commitment to reducing pollution and environmental degradation and to the more efficient use of resources. [Weak account, by commonly accepted model]
4. Equity: a commitment to meeting at least the basic needs of the poor of the present generation [*Not* accounted for by commonly accepted model]
5. Quality of life: a recognition that human well-being is constituted by more than just income growth. [*Not* accounted for by commonly accepted model]
6. Participation: the recognition that sustainable development requires the political
involvement of all groups or stakeholders in a society. "[*Not* accounted for by commonly accepted model]

(Jacobs 1999: 26)

The first core idea concerning integration of the environment and the economy is the one that is most widely accepted and applied. The Brundtland Report itself seeks to clarify its interpretation:

> The concept of sustainable development does imply limits--not absolute limits but limitations imposed by the present state of technology and social organizations on environmental resources and by the ability of the biosphere to absorb the effects of human activities. But technology and social organization can both be managed and improved to make way for a new era of economic growth. [WCED 1987: 8]

This version has been co-opted by the business community allowing companies and individuals to continue unjust and unsustainable practices concerning resource extraction, commercialization, and manufacturing, under the idea that GNP growth and sustainable development are not in conflict (Ekins 1993). Eco-feminist Vandana Shiva would most certainly agree with what Paul Ekins claims, and furthermore would posit that the lens of analysis that sheds light on this originates in a feminist school of thought. Maria Mies and Veronicka Benholdt-Thomsen posit "true sustainability and permanent growth are a contradiction in terms… …to preserve the foundations of life on earth, equality, justice, and solidarity, new models of society and economy are needed that can lead towards true sustainability, or subsistence…" (Mies & Benholdt-Thomsen 1999: 62).

All models of SD embrace the second issue of Futurity, and according to Desmond McNeill (2000:2) the ethical argument for the rights of future generations is not a contested issue. However this does raise the question of the rights of present generations as against those in the future, which is a deeply contested issue. Jacobs fourth, fifth, and sixth values are specifically related to this. The issue of equity represents the rights of the poor against those of the rich in the present.

The inequality of distribution in the present is also not a contested issue, but unfortunately the most commonly consumed model of SD leaves this set of *intra*-generational social justice issues in the realm of theory. The debate concerning the rights of the rich vs. those of the poor has been polarized along (global) boundaries of North and South, with those in the North enjoying a crushing advantage in agency and access, effectively creating a void in the South. It is in the negligence of these three related core values (equity, participation, and quality of life) that gender issues become most pronounced. The disparity between the rich and poor is

apparent, but a fact left out of mainstream debate is the gender inequality in all classes with severe inequality amongst the impoverished. Amartya Sen (2001) describes gender inequality as falling along seven major lines:

1. Mortality Inequality: the physical violence based on gender.
2. Natality Inequality: the preferential treatment of male infants and children at the expense of female, culminating in sex-selective abortion and infanticide.
3. Basic Facilities Inequality: access to schooling and education.
4. Special Opportunity Inequality: access to higher education and specialized training.
5. Professional Inequality: access to employment and promotion
6. Ownership Inequality: access to land, home, and inheritance issues.
7. Household Inequality: the way labor is divided and accumulates.

These seven forms of inequality all exist in the present generation and are founded upon the neglect of concepts within neo-Rawlsian notions of social justice, concerning the equity of distribution, quality of life, and participation. Peggy Antrobus (2004:82) frames these issues in terms of justice:

> -*economic justice* includes environment, sustainable development, livelihoods, and trade;
> -*gender justice* covers women's human rights, including sexual and reproductive rights and violence against women;
> -*political justice* includes democracy, power relations between women and men, women and the state, and the concepts of 'good governance' and an 'enabling environment.'

Another key ethical concern linking gender issues to SD involves another form of co-opting, not from the business community, but from the western environmental movement. Several theorists have described how the environmental movement has created disparity in the debate. "[F]orms of ecofeminism, in North and South, object to environmentalisms derived from the Western technocratic worldview on grounds

of patriarchy and blindness to gender-based power differences" (Neefjes 2002: 211). While this has taken place within the overall SD debate it is important to note that the development dialogue itself devalues both the positions of women and the environment almost creating a Catch-22 in which gender issues are trapped. Mary Mellor elucidates:

> subordination of women/nature reflects the superordination of the masculine in modern industrial capitalist societies. Modern society is seen as prioritizing men, culture, science and technology over women, nature, local knowledge and non-industrial technologies. It is in this sense that women and nature are linked. [Mellor 2001: 147]

Important to this discussion is the socio-political environment that SD was formalized under. Matthias Finger states:

> When analyzing the Brundtland Report, one can identify three distinct elements of such a political global 'politics': (1) the dialogue among enlightened individuals; (2) global awareness raising and corresponding ethics; and (3) planetary stewardship, a typical New Age expression (Brundtland, in Starke, 1990:65). All three elements are a direct outcome of the Brundtland Reports failure to identify the real causes of today's global ecological crisis and can be related to the preoccupation with cold war problems. [Matthias 1993: 43]

Basically, Finger is saying that SD was developed in a context to combat the spread of communism. While the basic impetus for these actions is over, the strategies focusing on economic growth still remained an integral part of the discourse. Wolfgang Sachs explains the evolution:

> [C]onceptually and politically, redevelopment (or catch up development. (Mies)) is now taking the shape of *sustainable development*, for 'our common future' as prescribed by the Brundtland Commission. Or else, it is being actively promoted as green and democratic redevelopment, for those assuming that the struggle against communism, the leitmotive of Truman's speech is over. But in its mainstream interpretation, sustainable development has been

> explicitly conceived as a strategy for sustaining 'development,' not for supporting the flourishing and enduring of an infinitely diverse natural and social life. [Sachs 1993: 16]

These ideas are synchronous with a number of critiques coming from the ecofeminist perspective, as well as the general radical interpretation of what SD should look like. Instead of enacting a form of development that is sustainable for people and the environment, especially those in the most grievous positions, the act of sustaining the current model of development, or catch up development, becomes the impetus. This often times neglects the imperatives that Sen, Gowen, and Jacobs allude to.

After this brief review of issues in SD, it is clear that the general ethical concerns of the debate mirror those presented from a gender perspective. Issues of equity, voice, and quality of life are major concerns for not only women, but the disenfranchised at large. The issues are systemic and structural, speaking of the need to (constantly) redefine and contextualize the development debate and its applications.

While the link between general issues and gender specific concerns within the sustainable development debate have been substantially illuminated, another more technical issue ads confusion to the equation. Indicators have been used for several decades by a number of IGO's (inter-governmental organizations) and NGO's (non-governmental organizations) with a variety of success and failure. Michael Jacobs describes the importance of these indicators, positing that they play a three-part role in SD. First, they are required in environmental-economic planning. These indicators identify problems and measure progress. Second, they help define goals of political and economic life. Third, indicators have a communicative function in that they inform the community at large about issues and trends fostering social participation (Jacobs 1993:

42). While indicators are developed with these goals in mind, they can also be used to distort and obscure the truth.

Barbara J. Nelson *et al.* describe the number of methodological ways that indicators mask reality. Incompleteness of data is a major issue. While it may be economically and logistically possible to collect data in one geographical or social area, this option may not be feasible elsewhere. In addition to this, the holes in the data are usually inversely represented along lines of "developed" and "developing" societies, i.e. data is unlikely to be available for developing societies. Complicating this matter are issues of validity. In many parts of the world nation states artificially inflate or deflate their statistics to alleviate international pressure to take action (1994).

Many of the indicators have methodological flaws, but the most commonly used indicator GDP is nefariously nebulous, completely obscuring issues of equity. Paul Ekins fleshes this out in a critique of two champions of GNP growth:

> Paul and Anne Ehrlich's version of the Brundtland definition purports that SD and GNP growth can both be achieved. [T]he facile linking of sustainable development with GNP growth not only tends to obscure the scale of the technological challenge that is actually involved in rendering these two incompatible... ... it makes no distinction between the development needs of North and South. [Ekins 1993: 93]

Michael Jacobs (1993:41) contextualizes this in terms of ethics and the need for new indicators stating:

> If quality of life (including equity and community/culture) is the objective of economic policy, society will need new indicators of progress... ...GNP, which measures economic growth, is clearly inadequate, both because it does not take account of environmental degradation and because it fails to record non-income aspects of quality of life.

This requisite of more equity reflective indicators has resulted in the formation of HDI (human development indicators) and GDI (gender in development indicators) that seek to repudiate some of the non-disclosures implicit in GNP indicators. These more recent indicators are employed in the United Nations Development Project's (UNDP) Human Development Reports (HDRs). Des Gasper posits that GDP is an indicator of only economic activity while the HDI is a mean of indexes that analyze lifespan, educational enrollment, literacy, and adjusts the GDP/capital measurement for purchasing power. Taken even further is GDI which disaggregates the HDI scale in terms of gender equity may be included in a more holistic documentation of development and SD's successes and failures (2004).

In addition to redefining indicators, more radical approaches of SD have sought to revolutionize the development project at large. Many criticisms fall upon the inherent patriarchal structuring and paternalism in "development" that many in the north have adopted and seek a more holistic approach that is often described as "bottom up." The variety of methods and mindsets employed fall into levels of analysis from global to local, North to South, as well as along a number of other lines of fission.

Grown and Sen describe a number of strategies that are aimed at changing structures and fostering a greater sense of government and business accountability. Furthermore a shift in consciousness is in order, making poor women a priority in planning and implementation. They are careful to note the link between large military budgets and growing poverty in industrialized nations: and state " [A] reduction in the U.S. military budget could potentially reduce the pressure on the balance of payments of debtor countries and hence burdens imposed by structural adjustment on the poor and middle classes in these countries" (Sen and Grown 1987: 84). This focus on military spending, commercialization, and exports

must be checked by creating greater accountability of corporations and increasing control over their activities.

At the global level, a movement that reflects the needs and views of the generally disempowered, including women, may support common goals of social (and therefore environmental) justice. At the regional level NGO's may be organized more effectively, and at the national level the development of a methodology for political actions in both broad and specific contexts are paramount (Sen and Grown 1987). At the local level we as individuals need to make appropriate choices of consumption and must educate our communities and selves about the inherent gender disparities that our current systems of interaction foster.

The globe has been divided into two major sections, the Global North and Global South. These terms generally describe groups of states distinguished by their position within the colonization processes of the modern and post-modern era. The Global South is the developing periphery, or Third World, while those in the Global North are the considered colonizers who make up the developed core. Gender disparity exists in both realms but as suffering is generally much worse in the Global South, much can be done to achieve greater gender equity by addressing class and access issues in this region that is home to the majority of the worlds population and women. Paul Ekins (1993:99) summarizes key issues in three principles the North and South may specifically address to promote a more (gender) equitable form of SD:

(1) "The Northern establishment must recognize its countries' primary responsibility for the present environmental crisis and determine to take radical action to address it.

(2) The North must further recognize that current structures of interdependence, aid and debt, make Southern sustainable development impossible. They must, therefore, embark on a wholesale reform of such institutions as GATT [WTO], the World Bank and IMF.

(3) Southern elites must recognize that the principle concern of sustainable development is with the poorest people in their countries and determine to let these people lead their development process by giving them equitable access to resources and support their grassroots movement.

Ekins (1993: 102) continues by describing a number of things that both the North and the South may do to achieve SD, but admits that it would require a marked shift in the way both individuals and groups go about their lives. He poses bold yet just claims of equitable redistribution of capital from the North to the South through debt cancellation and the returning of funds illegally funneled into western banks by corrupt elites in the South, as well as technology sharing that would allow the South to develop along a more sustainable path. For the South he suggests that policy there should be shifted to address equity issues along with the creation of a variety of securities through social organization and mobilization as well as the maximization of benefits of economies of scale.

Peggy Antrobus (2004:102) contextualizes these sentiments in terms of gender issues, positing that creating an enabling environment for progressive change would entail:

-priority is given to the direction of resources to meeting the needs of the poorest and most vulnerable groups in society;
-imbalances of power are mediated by structures of governance to ensure all men and women have equal access:
-governments are responsive to issues emerging from dialogue with self organized communities
-women's experience and perspectives would be taken into account in the design and implementation of programs of particular concern to them;
-at community and national levels mechanisms are in place to allow for continuous processes of negotiating consensus and mediating conflict, allowing for the recreation of sustainable livelihoods.

Ted Trainer (a theorist of urban subsistence economy) purports the "rejection of the three pillars of the expansive industrial

system: permanent growth, capitalist markets, and profit maximization." He opposes these with new principles:

> Self sufficiency in household, town, region, and nation
> Simple Lifestyle: people who are able to say, It is enough!
> Cooperation and Mutuality Zero Growth. [Mies & Benholdt-Thomsen 1999: 138]

All of the theorists mentioned have included several major issues that are integral to the SD debate. The concern over equity of distribution is implicit in most radical interpretations of sustainable development as well as the concept of equity of participation and voice. Combined with notions of sustainable consumption, or minimizing one's ecological footprint, a greater level of success may be achieved.

For individuals in the industrialized North, the responsibilities are great and on multiple levels. The unsustainable patterns of mass consumption along with complacency and ignorance must be checked with a greater sense of respect for people in places that cannot be felt or seen in the immediate time or space. At the global level, people inhabiting industrialized nations must make more responsible purchasing choices that do not irreparably damage the environment or add to inequity and foster suffering. Individuals and groups with the economic clout to do so should invest in alternative economic programs that work from the bottom up. Organizations such as the Grameen Bank, which started out as a microcredit program working under the assumption that "...if credit, with reasonable terms and conditions can be made available to the poor, they [would] have the skills and ability to haul themselves out of poverty..." (Yunus: 1997:10). This model organization has diversified and now deals with a number of social and economic issues, creating a healthier, even more productive social environment.

At the national level, individuals need to find ways to give voice to issues concerning social justice and environmental preservation to the policy makers in the government, creating a greater amount of accountability at the institutional level. At the local level, direct organization and participation in activities that deal with issues like gender inequality must be made a greater part of daily life. Individuals themselves have a responsibility to educate themselves concerning these issues and furthermore to act upon them. Organizations like the Grameen Bank that focus on empowerment of the community through the actions and involvement in economic activities. Now some of these NGO's have had such dramatic success increasing the quality of life of women and families that their level of effect and influence is becoming international, while at the same time still producing pronounced local results in terms of increasing flourishing.

It is important to recognize that not everyone in the "developed" North benefits from the modern convenience of consumer society, and that many in the industrialized countries suffer greatly, just as those everywhere else. This heightens the responsibility of those who have access to take action, and facilitate actions to help those in need. The needs of the poor, in theory should outweigh the relative wants of the wealthy who are already living what economist Amartya Sen (1999) calls the good life, which is realized through achievements of mental, physical, and emotional well-being, facilitated by social institutions. This heightened responsibility falls on the shoulders of elites everywhere, and requires a restructuring of the way we value each other and the environment. This restructuring should include the recognition of the interdependencies of international social and economic institutions that employ explanatory nationalism to justify the underfulfillment of human rights as well as restructuring of

these institutions to compensate for losses and mitigate damage (Pogge 2002).

In short, a gradual (not too slow) but marked revolution of ideology that moves society and individuals away from neo-liberal models of unending growth and consumption, renewing the focus on living within the carrying capacity of the earth, and functioning within a framework of social justice, is what is needed. The SD dialogue is fifty years in the making and has come a long way, yet what is most apparent now is how far we have to go. Only through constant and honest analysis of policies, theories, and practices, as well as increasing our individual and group senses of responsibility, (which may combine to form a global ethic) may we continue to improve gender and class equity. The complicated means and ends of gender sensitive sustainable development must be dealt with holistically by a multitude of actors, and at all levels of engagement simultaneously. Class and gender are both structural issues that must be addressed together with a focus on the needs of the Global South where structural disparity is more pronounced.

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The Commodification of Native Ceremonies and its Socio-Cultural Impacts on Traditional Economies: A Case Study on the Shipibo-Conibo of the Central Peruvian Amazon

Kristina Pearson

Abstract- *The Shipibo-Conibo people of the central Peruvian Amazon, an ethnolinguistic group of the Panoan family, have been experiencing the impacts of their peripheral position in the modern world-system since the first colonial conquest of the Americas. Today, the global socio-economic situation is impacting the Shipibo-Conibo in more intimate ways leading to the commodification of their sacred ayahuasca ceremonies. This paper will explore the dialectical conflict between Shipibo-Conibo societal norms with regard to shamanism and economic egalitarianism and the global economic system.*

Theoretical Perspective

The 'World-Systems Approach' is a theoretical perspective that provides the lens from which to analyze a subject (culture-group, nation-state, etc.) in relation to the modern global economic system. This theory assumes that the situation of the subject is historically contingent on their relationship to the world economic system. Therefore, this paper will analyze the

Shipibo-Conibo ethnolinguistic group of the central Peruvian Amazon and their sporadic relation to the world system. How did Shipibo ayahuasca ceremonies become commodified in the global economy? A commodity is anything assigned a "market value" that can be exchanged monetarily on the market. Commodities are created in a process known as commodification. This is the process whereby exchanges are brought into the realm of global capitalism by being based on money as opposed to moral, spiritual, physical, cultural, social, or personal obligations (Hall 2000). Social relations, goods, services, and even spirituality, once commodified, can be bought and sold for cash. The process of exchange then becomes alienated from the means of production and its socio-cultural role (Hall 2000).

There are still many aspects of this world that lay in the realm of the non-commodified such as nature, housework, love, and most social relations. It is these non-commodified goods that subsidize the modern world system (Dunaway 2001). For example, factory workers in the developing world can be exploited for $1 a day because they have a wife at home tending the agricultural fields which provides non-commodified food for the factory worker through the wife's non-commodified labor. However, the non-commodified world can only bear this extra burden for a matter of time before it leads to such processes as culture change or until these non-commodified goods (food, labor, etc.) are also commodified and incorporated into the global economic system (Dunaway 2001). This is the process of capitalist expansion. World-systems theorists tend to agree that if the whole world were to become commodified the modern global economic system would collapse (Hall 2000). Yet, capitalism requires growth in order to function, and so the current system as it is will continue to envelope much of the non-commodified world until its eventual collapse. For this reason, Taylor (1996) predicts a world impasse because he believes that the

system will be so strained due to environmental stress that the system will breakdown.

One of the main premises of the World-Systems Approach is the relation between the so-called core, semiperiphery, and periphery. The core is the center of industrial production coupled with class divisions based on divisions of labor. The periphery is defined as a source of raw materials, cheap labor, and a small bourgeoisie. The semiperiphery is then that which lies between the core and the periphery (Hall 2000). I consider the Amazon basin to be the "extreme periphery" because it is the periphery of the peripheral countries of South America. The indigenous people of the Amazon basin are so far on the peripheral edge of the world-system that there really is no significant bourgeoisie or little production for outside consumption. Their self-sufficiency really makes them as about as far from the global economic system as one could get in today's world.

The world-system promotes core development and peripheral impoverishment through unequal exchange (Hall 2000). The Amazon basin has been a significant area of capitalist resource extraction for colonial (core) country wealth since the 1800's. The indigenous people have received little of positive value in exchange. Instead, the world-system has brought them poverty, European diseases, and environmental degradation.

An important aspect of the World-Systems Approach is the dialectic between the global and the local (Hall 2000). It has been a criticism of the World-Systems Approach that it does not take into consideration local culture. However, I would argue this approach is an important analytical tool for exploring local culture change. So, if culture is defined as the human adaptation to the world around us, there is a strong dialectic between local cultures and the global processes of market forces. This dialectic can be ecological, social, or ideological in nature. With globalization (the process of the

expansion of the world-system) and the dialectical conflict between global and local, culture change is inevitable within the world-system.

As the world changes because of global market forces, cultures are forced to change to adapt to the new global market environment. Unfortunately because of the hegemonic ideology, the dominant modern culture is touted to be the most 'efficient' way of interacting with the global economy. Cultures are forced to change when incorporated into the world-system to be "converted into a new culture compatible with producing for the world market" (Taylor 1996:39). This is the process of westernization where non-Western cultures replace their cultural traditions to become increasingly similar to the dominant culture, not necessarily through coercion but through emulation of hegemonic culture (Taylor 1996). So although "one section of humanity, comparatively rich, hard-working, and creating considerable surpluses, has known how to, and still does know how to, exchange things of great value, under different forms and for reasons different from those with which we are familiar" (Mauss 1990:33) the world-system compels incorporation into the global market economy. It is no longer 'rational' or 'efficient' under the hegemonic ideal to perform elaborate economic rituals.

How are the global processes of technology transfer, interstate trade, and hegemonic cycles affecting social relations and culture change at the local level (Hall 2000)? These processes are shown by Kondratieff waves (K-waves) based on 50 year market cycles of the introduction of new technology followed by increased trade (A-phase), and finally by market saturation and falling trade prices (B-phase) until the introduction of a new technology starts the process over again. These K-waves are measured indirectly through trade volume and prices. Hegemonic cycles, as Taylor (1996) pointed out, are about twice as long as K-waves and are punctuated by periods of interhegemony. The modern world-system has been

through three hegemonic cycles: Dutch, British, and American (Taylor 1996). All of these processes converge to create certain global socio-economic conditions. This does not necessarily entail cause and effect, but rather creates the conditions ripe for say colonialist expansion.

One criticism of world-systems theory is that there are other forces and cycles that act on both local and global levels that are usually not taken into consideration by this approach. For example, ecological cycles play an important part on all local environments and even the tourism industry has cycles that can have global implications (Johnston 2006). So all of these different cycles – hegemonic, k-waves, ecological, and tourism – are converging contemporaneously to act on Shipibo spirituality.

The current down swing of the hegemonic cycle is having important implications on the global tourist market. Hegemonic decline is usually accompanied by the questioning of the authority of the state, increased plurality, and a global power vacuum. This creates the socio-economic conditions that allows for social movements and terrorism to affect the geo-politics of the tourist market pushing Western tourists from certain locations to others based on perceived safety. Post-modern ideology permeating the dominant society leads to hegemonic ideological disintegration and the increased seeking out of the "other" as a rejection of modernity. The World-System Approach does not hold post-modern theory to be a valid theoretical perspective, but instead a result of hegemonic decline where "anything goes" (Hall 2000). This creates the conditions that are pushing tourists to seek out the relatively safe, yet exotic destination of the Peruvian Amazon.

On the other hand, the hegemonic struggle between declining American hegemony and those states vying for hegemonic control, namely China, has led to a neo-colonial push for resource control within the periphery. China and the USA have been competing for oil contracts in the Peruvian

Amazon, thus damaging the Amazon basin's ecological integrity and harming the Shipibo subsistence base. These processes are creating the social conditions for the commodification of Shipibo ceremonies.

The World-System Approach is unique because of its holistic method of taking into consideration the historical processes and global interconnections acting on the subject of analysis. Although criticized for being macro-economically oriented or core-centric (thus Western-centric), I believe it to be the most comprehensive theoretical perspective for understanding the roles, processes, and impacts of the global economic system (Hall 2000).

Historical Setting

The Shipibo and Conibo, two similar culture groups making up one ethnolingustic group of the Panoan family, were hypothesized to have a population of around 50,000 before the European conquest of the Americas. They have inhabited the Ucayali River basin (a major tributary to the Amazon River) of the upper Peruvian Montaña for thousands of years according to archaeological evidence. With the discovery and subsequent domestication of manioc, nomadic hunter-gatherers in the Amazon Basin began to settle in larger settlements following river patterns. They lived in dispersed communal settlements based along kinship lines (Bergman 1980). I would argue that the Shipibo and Conibo peoples were part of an earlier world-system making up the periphery of the Inca Empire. Based on archaeological evidence, early written records, and oral history there were extensive trade networks between the Andean Inca communities and Amazonian peoples.

As mentioned before, hegemonic cycles have had major implications for the Shipibo-Conibo. With the Fall of Dutch hegemony, England, Spain, France, and Portugal vied for the position of hegemon during the first interhegemonic phase

from 1672-1792 (Taylor 1996). This led to the global conditions ripe for a major increase in the process of colonization because colonial resources were necessary for the promotion of development within the core hegemonic contenders. The state that had control over the most resources could take that position of economic power as a hegemon.

With the first European conquerors to the American continents, European diseases ravaged indigenous populations in their first meeting with the modern world-system. More dominant riverine Amazonian groups were all but wiped out in the first waves of European disease because of their greater contact with outsiders based on their location along prominent riverfront. Because the Shipibo and Conibo groups lived further up the Ucayali and up smaller tributaries they were relatively protected from the onslaught of disease. Although their population declined to about 3,000, their "backwoods" territory worked to their advantage because as more dominant indigenous groups were wiped out it left prime riverfront territory for the Shipibo and Conibo groups to inhabit. The implications for the Shipibo-Conibo today is that they are now the dominant group of the central Ucayali, which has led to increased Western acculturation as opposed to more isolated groups inhabiting interfluvial zones. The Shipibo and Conibo people eventually merged to form one group, the Shipibo-Conibo, through intermarriage and shared territory, and today their population stands around 40,000 (Eakin 1986).

The second 'interhegemonic' phase from 1873-1914 saw another period of colonial expansion for control over peripheral resources. The USA claimed control over Cuba, Puerto Rico, and the Philippines in their first territorial expansion of American colonialism (Taylor 1996). As the European powers were declining, the USA was gradually accumulating more and more resources in order to promote its development into a global hegemonic power. The Monroe Doctrine was an important piece of legislation that gave the

USA neo-colonial control over the Americas, which has had profound implications on the development of Latin America, and its repercussions can still be felt today.

The first incorporation of the Shipibo-Conibo into the global market economy came with the "Rubber Boom" from 1850-1920 (Barham & Coomes 1996) in a process known as proletarianization. Proletarianization is a process whereby fewer people rely on a subsistence economy and begin to enter or are forced into wage labor (Hall 2000). Shipibo-Conibo men were forced from subsistence to wage labor when wild rubber was discovered in the Amazon Basin in the mid-nineteenth century. Rubber was popular for use in industrial manufacture within the core countries. Thus began the large-scale extraction of resources from the peripheral Amazon Basin to enhance core wealth in the colonial countries.

The increased industrialization and the invention of the automobile with rubber tires follows a K-wave of new technology leading to increased trade and market prices for rubber until the British took rubber tree seeds and started large-scale rubber production on plantations in Southeast Asia. This led to market saturation and the subsequent fall of rubber prices with devastating economic impacts within the Amazon Basin. During the seventy years of the Rubber Boom, incomes increased 800%, the population increased 400%, and major urban centers popped up throughout the Amazon Basin such as Iquitos and Pucallpa, Peru (Barham & Coomes 1996). Both cities have had major implications for development in the Peruvian Amazon, especially since Pucallpa cuts into the heart of traditional Shipibo-Conibo territory. This was the first time that the Amazon Basin was really incorporated into both the international market economy, as well as the national political spheres of its respective countries. With the saturation of the rubber market and the decline of wild rubber production, incomes in the region dropped to pre-boom levels and poverty ensued. Still today the region has not recovered and incomes

have yet to rise to pre-boom levels (Barham and Coomes 1996).

The Shipibo were one of the major groups exploited for their very cheap to sometimes slave labor during this Rubber Boom period. This caused the breakdown of Shipibo communities as many men were forced to travel long distances usually without their families to work for the rubber barons. As well, rubber extraction and trade led to increased ecological destruction of indigenous territory in some cases displacing whole communities to make room for national development to facilitate rubber extraction and trade (Barham and Coomes 1996). As men began to work as wage laborers this led to culture change as the burden of household and subsistence labor was left to the non-commodified labor of the women maintaining their households while the men were away (Dunaway 2001). "By keeping production costs lower, women's hidden inputs subsidize the production process throughout the commodity chain, thereby keeping consumer prices lower and profits higher. To generate family survival requirements, women engage in 'shadow work' outside those formal capitalist structures in which labor is remunerated" (Dunaway 2001). Still today, there are scattered Shipibo families displaced from their communities left over as remnants from the Rubber Boom (Bergman 1980).

Soon after the Amazon Basin was opened up to commercial exploitation from the Rubber Boom, more and more land and natural resources in the region began to be commodified. Logging, mining, hydrocarbon extraction, industrial-scale agriculture, and bioprospecting all follow these same world-system processes of K-waves and hegemonic cycles. With the increased consumption and suburbanization of the new American hegemon came an increase in the exploitation of luxury resources to feed the dominant mass consumerist ideology of the American middle class. Such trade goods as mahogany wood and exotic fruits were sought

by the core nations in the resource richness of the Amazon basin.

Oil, natural gas, and new medicinal plants are being sought in the current period of American hegemonic decline. The political instability that characterizes periods of hegemonic decline because of the global power vacuum has led to volatility in many oil-producing areas of the world such as central Asia and the Middle East. This leaves the Amazon Basin as one of the most stable places for oil and natural gas extraction and accordingly hydrocarbon drilling has increased dramatically in the Peruvian Amazon. And like mentioned above, Chinese and American corporations have been vying for control over Peru's hydrocarbon resources. Too, as many Americans have become disillusioned by the nine-to-five wage labor system and disenchanted with modernist ideology, bioprospecting has increased in search of medicinal plants to combat the diseases of an increasingly detached and sedentary life. However, indigenous intellectual property rights are usually not respected. Science and the dominant society have reduced many indigenous medicines to plant chemical properties and disembody it from the social and spiritual concepts usually attached to medicinal plants by indigenous peoples (Pickering 2006).

This increased exploitation of natural resources, land loss, and environmental degradation has negatively affected the Shipibo-Conibo subsistence base because "capitalist commodity chains compete with households for limited ecological resources" (Dunaway 2001). When Shipibo men can no longer provide for their families through hunting and fishing they are forced to turn to wage labor either working for the extractive industries, large plantation owners, or in the cities. Originally, men averaged 3.4 hours per day and women 4.4 hours per day to provide the necessary subsistence for their families in the traditional socially-embedded economy. Now some Shipibo men are forced to work on large timber

plantations for 12 hours a day, removed from their families, and average an annual per capita income of $50 (Bergman 1980). "It is instructive that a Shipibo husband and wife provide food for themselves and their children from the tropical rainforest by working [so few hours] per day. Few parents in modern societies procure food of equal quality in less time" (Bergman 1980: xxi). This degradation of Shipibo society and their environment leads to impoverishment and culture change.

Tourism and Global Processes

Tourism since World War II has become one of the world's largest industries with billions of dollars exchanging hands annually. Tourism is the epitome of unequal periphery-core exchange. For example, you never see "peripheral peoples" aka sub-Saharan Africans or indigenous Amazonians backpacking across the USA. Western tourists journey to the periphery to extract a fantasy amongst the non-modern. They expect that because of their hard work within the core of the global economic system that they are owed two-weeks to indulge hedonistically in the exotic. However, "usually their [tourists'] own livelihood comes from the very industries which threaten biological and cultural diversity worldwide. They seek a break from the structure they live in, without understanding economic globalization or its harsh societal and cross cultural impacts" (Johnston 2006:17).

Hegemonic decline has, as mentioned above, created the conditions for the disillusionment within the dominant society. This has also led to the emergence of the New Age Spiritual movement. In the modern world system, where capitalist consumption reigns supreme, the dominant modern society which arose under the latest hegemonic influence has lost the last vestiges of what is termed traditional culture. Culture, however, is an essential human adaptation to the world

around us and is, therefore, a human necessity. So when some within the dominant society realized their culture is based on capitalist values, they went out in search of the remaining traditional culture of this world, that which had yet to be enveloped by the global economic system. Mass tourism arose from the dominant society's need to escape from modernity, and the "New Age" spiritual movement arose to seek out another way of connecting with the outside world (Johnston 2006). New Age tourism, although marketed as an alternative to the modern global system, really is just a mask for "product development [of] packages that target the neuroses created by our affluent but detached consumer life [offering] genuine 'shamanic' healing sessions or 'native wisdom' retreats" (Johnston 2006:9-10). In a new form of neo-colonialism the colonizers are seeking out the colonized for an alternative to modernity, which arose from this exact relationship between the colonizers and the colonized (Johnston 2006). Modernity was only possible because of colonialism (Mignolo 2005), and perhaps this new neo-colonial relationship is prolonging modernity as opposed to deconstructing or changing it, as many of the post-modern New Agers believe they are doing.

It is true that there is value to cultural exchange and by experiencing the "other" it can help one to learn more about themselves and their culture. Yet, few tourists really want or understand how to look deeply into the system that allows for them to travel for leisure. And few New Agers reflect on the implications of appropriating others' cultural traditions and the way they, by trying to reject the dominant system, are actually hastening its (the modern global economy's) spread to the last frontiers of the earth.

Commodification of indigenous ceremonies is not a unique phenomenon to the Shipibo-Conibo. The Lakota people have been dealing with the appropriation of their ceremonies such as sundances and their ceremonial objects by non-Lakota peoples for decades. In order to deal with the

onslaught of New Age tourists "in May 2003, Lakota spiritual leaders closed all ceremonies to non-native persons… Ceremonies are being commercialized, diluted with new age beliefs" (Johnston 2006: 100). Huichol peyote ceremonies also suffered a tourist/New Ager onslaught especially in the 1970s. Many of these outsiders sought out the Huichol to fill a role "as more and more people suffer from uncomfortable but empty lives, the mind body panacea of peyote may loom as a kind of Holy Grail or last-ditch cure. What therapy cannot solve, peyote will" (Johnston 2006: 98). Finally, the commodification of Fijian kava ceremonies has had negative implications for the whole Fijian culture. Kava was once only used as a ritual welcome for visiting leaders from other clans. Kava then became popular with the major increase in tourists to the Fijian islands. Kava then became just an exotic legal narcotic and especially became popular amongst the Western backpacking group. When kava was usurped as a substance to use for pleasure, Fijians themselves began using kava recreationally. This has had major implications both medically (kava is very hard on the liver and kidneys when consumed in large quantities) and also socially, as kava is believed to make people more tired and lazy and therefore not productive members of society. There have also been environmental consequences as well. The wood from a sacred tree was the only type allowed by Fijian cultural norms to be used in carving Fijian kava bowls. However, because there has been such a demand by tourists to purchase these bowls as souvenirs the tree has become severely endangered. Now the tree is protected and not even the Fijian people can use it to make kava bowls for their own traditional ceremonies.[1] As World-Systems Theory suggests, cultural commodification and tourism have the potential to be a precarious combination for the world's indigenous peoples.

Roles of Traditional Ayahuasca Ceremonies in Shipibo-Conibo Culture

Ayahuasca ceremonies play a very important role within Shipibo-Conibo culture. Ayahuasca is a psychotropic vine which grows throughout the Amazon Basin. However, ayahuasca has traditionally only been used in intense spiritual rituals with a specific purpose. Ayahuasca ceremonies are undertaken for many purposes such as healing, causing harm, protection against evil and spirits, to see the future, to journey to other realms of time and space, and finally for artistic inspiration (Langdon and Baer 1992). Shamans, which are a mixture of traditional medicine men and spiritual leaders, are the regulators of ayahuasca use. They are the only ones that are considered knowledgeable enough to administer the ayahuasca brew and lead the ceremonies. They go through years of intense training and apprentice with master shamans until they are declared ready to lead such ceremonies. Shamans undergo intense dieting practices and observe other taboos in order to reach the status as an official shaman.

Shamans play an important role in Shipibo-Conibo society because through public ritual they employ their power for the benefit of the community. Shamans usually end up playing the role as community mediators and are generally the ideological, political, and spiritual leaders because of the reverence accorded them for their power to communicate with the spiritual world and maintain a balance within the community (Langdon and Baer 1992). Therefore,

> in its broadest sense, shamanism is preoccupied with the well-being of society and its individuals, with social harmony, and with growth and reproduction of the entire universe. It encompasses the supernatural, as well as the social and ecological. Thus shamanism is a central cultural institution, which, through ritual, ties together the mythic past and worldview. [Langdon and Baer 1992: 13]

So what happens when the shamans come into relation with capitalist economic individualism?

Economic Impacts

Ayahuasca "in the traditional form…costs only what the patient feels moved to pay. At times this may be a sizeable sum, but it is limited only by the ability to pay. [Shamans] say they cannot charge for their services because it is a power entrusted in them by a higher source" (Bergman 1980:193). Yet, tourists have begun to trickle into the region over the past few years seeking out these ayahuasca ceremonies. Instead of leaving their communities to search for wage labor or participate in the subsistence economy, a few entrepreneurial shamans have begun offering their ayahuasca ceremonies to tourists. Some of these shamans are offering these ceremonies for up to $30 per person per ceremony, which is more money than most community members can make in a week. Now these entrepreneurial shamans have the ability to consume more material goods, and they can also afford to send their children to better schools in the cities. There is concern within the community that shamans could become more occupied by providing ceremonies for the tourists then they are with the well-being of their community (Proctor 2001).

Shamans thus have become or at least have the potential to be the new economic elite. In one example, a famous shaman amongst the New Age crowd owns a house in the city, owns the motorized boats that provide the transportation up and down the river, and his grandkids are sent to the best schools in Pucallpa. Originally, Shipibo communities were highly egalitarian with communal labor usually split along gender lines, agricultural production was distributed evenly amongst families, and all households were relatively equal in economic terms. Now, some community members cannot even afford the sixty cents it costs to travel to

the city, while shamans have a monopoly on the mechanized transportation. But are the shamans at fault for taking advantage of this economic opportunity?

More cash income from tourists has had a trickle-down effect throughout the community. Tourists purchase crafts from other households, buy goods from the small stores, and pay for other activities such as boat rides or trips into the forest. So communities with entrepreneurial shamans are reaping the benefits of added cash income into their communities. However, tourism, too, works in cycles. It takes about 15 years before destinations start to lose their 'relevance' within the global economic system and the negative effects begin to outweigh the positive (Johnston 2006). Because tourism is a relatively new phenomenon within the Shipibo-Conibo communities they are currently on the tourist market cycle upswing. So right now the communities are feeling the positive impacts of increased tourism and the rise in cash income, however, negative impacts are inevitable if tourism and ayahuasca use are not regulated by communities. Additionally, more remote communities are looking to get into the tourist trade because they see the economic benefits their neighbors accrue.

There is a growing rift between shamans though. "It makes me ashamed when shamans charge the tourists for their ceremonies," Valles (a Shipibo shaman) says. "But if people want to know about our reality and about Shipibo culture, I want to show them" (Proctor 2001). There are those that believe that these ceremonies are a basic human right and no one should ever have to pay for them or that they should not be done recreationally. However, there are other shamans that believe if they can make money by providing these ceremonies to tourists then they have every right to receive that extra cash income to make their families better off. "We, the Shipibos, are like any other human community -- we need to grow and change. We can't just stay the same so that the tourists can stare

at the naked Indians in feathers and the anthropologists can treat us like a living museum," said Shipibo shaman Mateo Arevalo (Proctor 2001).

Socio-Cultural Impacts

The Shipibo-Conibo believe that every plant and animal has a spirit and only the shamans can communicate with them (Langdon and Baer 1992). This is a very important role within such an ecologically-sensitive region as the Amazon Basin. Ayahuasca use is an important tool for maintaining relations and communicating with the spirits of the natural world. So what happens when people began partaking in ceremonies for pleasure or profit instead of reaching out to the natural world? One effect is that the ayahuasca ceremonies can lose their sacredness and become profane. This has led to the recreational use of ayahuasca amongst Shipibo youth. However, it has also aroused the next generation of Shipibo-Conibo to become more interested in shamanism, whereas interest in traditional shamanism had been waning in decades past. There is a difference in motivation though; what once required spiritual drive is now driven by economic motivation (Proctor 2001).

Shamans are also using ayahuasca a lot more than they traditionally did. For example, one shaman undertook ayahuasca ceremonies every night for two weeks because he had tourists willing to pay[2]. However, ayahuasca is an intense hallucinogenic substance and could have harmful medical consequences for overuse. Ayahuasca is known to be very hard on the liver and kidneys (Proctor 2001).

The increased use of ayahuasca has also led to increased missionary activity. Missionaries were one of the first groups to impact the Shipibo-Conibo with the advent of the modern world system. Missionaries have been working for centuries to convert the Shipibo-Conibo from practicing their

traditional spirituality to Christianity. Missionary activity has increased in order to combat this resurgence in traditional ceremonies[3].

Conclusions

So does commodifying indigenous spirituality within the modern world system strengthen culture or hasten culture change? Cultures have never been and will never be static and unchanging. However, I believe that contact with the modern world system does hasten culture change to some degree. Humans naturally adapt their culture to fit within their environments, not just natural environments but also social and economic. So this dialectic between Shipibo-Conibo societal norms with regard to shamanism and economic egalitarianism and the global economy will inevitably lead to culture change even though a resurgence in traditional culture is emerging during the tourism cycle upswing. Also, more and more contact with Western tourists will continue to have an impact on Shipibo culture as well. However, for the time being, Shipibo-Conibo culture is resurging and many of the young people are once again proud to be Shipibo.

The most important factor, and an important criticism of the World-Systems Approach, is that the Shipibo-Conibo are not passive actors within the world-system (Veber 1998). There is no problem in using the world-system as the unit of analysis, however,

> even marginal populations…who succeed in maintaining viable cultures and identities do not constitute bounded cultural repositories of exotic primordial sentiments…rather, they owe their success partly to their own creative efforts, partly to their existence in a weak nation-state, and partly to their existence as objects of a transnational discourse that…pays increasing attention to the world's indigenous people. [Veber 1998:383]

As active agents, the Shipibo-Conibo can take some practical steps to mitigate the impacts of the commodification of ayahuasca ceremonies for tourism. As long as communities are empowered to take ownership over the local tourist market and to make collective decisions regarding tourism and ayahuasca use they can be active agents to lessen the negative impacts. Additionally, tourists, community members, and shamans need to be educated about the implications of commodifying ceremonies such as these. Perhaps a global dialogue between indigenous peoples dealing with tourism's impacts could be beneficial to all parties involved.

Johnston (2006:17) states that

> most tourists are on board the holiday canoe to expand their understanding of the world, not to fundamentally challenge or dismantle it. They want to return home to continue their career, their studies... They are searching for an adventure, a fantasy...but not a life shattering epiphany or calling.

Perhaps if tourists, too, were educated about the impacts of the global economic system from which they are a part of and how they actively influence capitalist growth, they would be more conscious of their role and would be more informed regarding tourism decisions.

Nonetheless, the Shipibo-Conibo, by sharing their culture and their traditional ceremonies, are offering an alternative viewpoint from which to see the world. By putting the Shipibo on the world stage through tourism, they are able to present another way of thinking and perceiving the world. They can help to "shift the geography, and the geo-politics of knowledge, of critical theory to a new terrain of *decoloniality*" (Mignolo 2005: xix) as the social conditions sanction during this period of hegemonic decline. And as long as providing ayahuasca to tourists does not become an "empty commercial endeavor" (Proctor 2001) then both tourists and the Shipibo can continue to share this millennia-old ceremonial tradition.

NOTES

[1]This information about the commodification of Fijian kava ceremonies is my own personal commentary from conversations with Fijians and my own personal experience living in the islands of Fiji in 2003.
[2]This is from my own personal experience staying in a Shipibo community in July 2006.
[3]This was told to me during a conversation with some Shipibo and Peruvians from a local NGO during a visit in August 2006.

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The Amish and Depression

Anna Condello Schwinger

Abstract- *The purpose of this paper is to closely examine emotional states, and specifically depression, among the Amish, and in particular the Old Order Amish that live in Lancaster Pennsylvania. I will investigate depression among the Amish by examining psychological and anthropological approaches to this phenomenon in order to explain the cultural, social, and psychological aspects that contribute to depression among the Amish. I will also use a theory on the cultural construction of emotion presented by Margot L. Lyon in order to argue that the phenomenon of depression is culturally bound and is in part due to conflict derived from living in two societies, those of the Amish and the "English." I will further be looking at the cultural historical context and how it has had and is still having persistent influence on the Amish cultural ideologies and beliefs, and specifically religious beliefs and practices.*

In this paper I examine the Amish and depression. I will be exploring depression among the Amish in terms of both psychological approaches (looking at the progression of theories concerning depression and the gene theory) and anthropological approaches (taking into account the cultural historical context, as well as the cultural construction of emotion). It is very important to look at the cultural beliefs and wants and how they conflict with individual beliefs and wants. I argue that depression amongst the Amish is caused in part by their religious beliefs that confine them and do not allow them to express certain emotions; thus the Amish "bottle" their emotions up because they would be "losing their faith" if they were to draw attention to themselves. This is very different

from the "English" (non-Amish Americans) who live around the Amish because American society values individualism greatly, while the Amish look at such behavior as unacceptable. Thus, some Amish, especially the youth, are living in a world where they are being torn between two cultural systems.

My theoretical approaches in regards to looking at depression among the Amish are both psychological and anthropological. In regards to the psychological aspect I will discuss stages of thought concerning depression and specifically the gene theory. Regarding the anthropological theories I will examine the cultural historical context, specifically examining cultural beliefs and religion, as well as the cultural construction of emotion as an explanation of depression. My methodology is based on second hand research only because I was unable to visit the Amish and conduct field research.

The Amish trace their heritage back to the Swiss Anabaptists. In 1517 Martin Luther led them in a protest against the Swiss Anabaptists. This movement was called the Protestant Reformation. This movement resulted in the formation of a permanent branch within Christendom. This new religion held the belief that baptism should only be done to adults who were willing and able to fully devote their entire life to a radical obedience to the teachings of Jesus Christ. As a result, adult baptism became a symbol of the new movement. The Anabaptists did not accept this new movement and the people who joined the new movement soon found themselves fleeing for their lives. There were numerous cases of torture, branding, burning, imprisonment, drowning, and so forth. This persisted until around 1614 when the killing in Switzerland finally began to recede. However, numerous other forms of torture continued until the 18th century (Hostetler 1968).

The Amish took their name from Jacob Ammann, an Anabaptist leader in Alsace. Ammann suggested that they hold

communion two times a year and stated that foot washing was a religious rite in the communion service. The Swiss rejected Ammann's attempt to reform the church in order to maintain its purity. However, the Alsatian Congregations supported him greatly, which led to the formation of the Amish Church. Ammann advocated that the Amish not wear fashionable clothes, and trim their beards, and he applied a strict discipline within his congregations. The Amish found refuge in Alsace, the Netherlands, and Moravia, and eventually they moved westward to the United States. This movement into the United States peaked between 1727 and 1770 (Kraybill 1989).

As a result of this movement in the United States, the Amish underwent three divisions. The first division occurred in 1877. This first group was considered to be the Traditional Amish or Old Order Amish. These Amish carried out their worship in the more traditional way in houses. There was also the Amish-Mennonite or "Meeting House" who worshiped in churches. In 1910 another division occurred. This division was considered to be the more liberal sect. They formed what was called the Peachy Church and held strongly on to evangelical religious expressions. They had Sunday school, which was not normal for the Amish and also allowed for technological innovations such as, telephones, electricity, and even cars. The Peachy Church is now affiliated with the Beachy Amish Church. The Beachy Amish Church favors a milder discipline for its members by allowing for an even a greater use of technological equipment, church buildings, Sunday school, and Bible school, and some even allow some missionary work. The Beachy Amish are also less likely to excommunicate or ban individuals from the community. Lastly, the third division occured in 1966. These Amish are considered to be New Order Amish. They left the more traditional Church because they used modern farm machines (Hostetler 1968).

The Amish have an amazing lifestyle that is centered around devotion to God. They developed a New Testament that was considered to be the guide for everyday life. This New Testament promoted: "1. Obedience to the teachings of Jesus Christ. 2. The Church as a covenant community. 3. Adult, or "believers," baptism, 4. Social separation from the evil world. 5. Exclusion of errant members from communion. 6. The rejection of violence. 7. The refusal to swear oaths" (Kraybill 1989). The Amish, in comparison to other religions have three very distinct features. The first is that they have developed a new concept of the Church by making it a voluntary group of individuals whose beliefs make individual liable to one another as well as separate each other and the group from the outside world. The second is extreme obedience to the teachings of Jesus Christ. As a result of this obedience, the behavior of the individual is transformed. Lastly, they hold an ethic of love that rejects any act of violence in every aspect of life.

The Amish believe that modernization would pull their community apart. They believe that the relationships between people of modern societies are more superficial and not nearly as closely knit. The Amish feel that these relationship systems are abstract and complex. As a response to this fear, the Amish use their social system and mostly their belief systems to protect their cultural identity from modernization. They further believe that in order to be completely obedient to the Church, they must be completely isolated from the outside world and only in a state such as this will they receive blessings from God for eternal spiritual life and peace. The Amish deem that Christ has called upon them to abandon all kinds of self-interest, by denying the self; they dedicate their lives to divine precepts that bring glory and honor to God. According to the Amish, self-will will always stand in the way of obedience to God. For the Amish the notion of evil is found in human

longing for self-explanation and not in the material world (Kraybill 1989).

In the Amish communities most Amish speak Dutch at home and only learn English when they attend school. The Amish have a Dutch word called *Gelassenheit*. This word means submissions, self-surrender, yielding to God, Church, and the community. "*Gelassenheit* penetrates many practical dimensions of Amish life-values, symbols, ritual, personality, and social organization. It is a kind of thinking about one's relationship to God" (Kraybill 1989). *Gelassenheit* is also a way of thinking about others. It means respecting, serving, and obeying the community. The concept of *Gelassenheit* demands an extremely modest way of acting, dressing, talking, and even walking. Ultimately, *Gelassenheit* is a way to structure social life so that everything remains small, simple, and compact. It also regulates the relationship between an individual and the community simply by "transforming the psychic energies of the individual into group capital" (Kraybill 1989). *Gelassenheit* also prohibits the use of force in regards to human relations. So, the Amish avoid serving in political offices, using courts, working as police officers, and serving in the military.

In the Amish communities there have been many people who say that the Amish experience depression. In numerous works, the psychologists refer to depression as the common cold because it is so common among people. Depression among Westerners can be traced all the way back to the Biblical tale of King Saul and Homer's Ajax. Both of these figures experienced major depressive disorders. The notion of depression has undergone many stages of thought. The first stage was Freud's conception of depression described through his psychoanalytic view which, "stresses unresolved conflicts from the past, locked away in the unconscious, as the main determinant of the disorder" (Furman and Bender 2003:124). This was followed by the view of Taft and the

functionalists who rejected the psychoanalytic view and replaced it by arguing that emotions were simply to be accepted and not changed; "Ideally, emotions are to be tolerated and processed through our consciousness prior to any action" (Furman and Bender 2003:125). Today the most common explanation for depression is the medical model, which seeks to both treat and understand depression. "Psychopharmacological developments, through the study of antidepressant medications and their effects on depressive symptoms, have supported the biomedical view of depression and other mental disorders. Medical research has sought to demonstrate that depression is caused by fluctuations in levels of neurotransmitters, which lead to the subjective experience of depression" (Furman and Bender 2003:125). Therefore depression can be viewed as partically a biological phenomenomen.

Many scholars turned to the Amish in order to understand depression because the Amish tend to have very large families that range from six to ten children, which would make it easy to locate a gene that could be causing depression. The number of children varies greatly because the Amish believe that they will have as many children as God means them to have. For the most part the Amish society is extremely secluded and hardly any people enter the community or leave it. According to Jerry Floersch, Jeffery Longhofer, and Kristine Latta (1997:137)

> for many social and natural scientists, the Old Order Amish are more than the 'ideal human laboratory'; they are in but not of the world. They are a perfectly closed system where humility, work, obedience, and thrift not only mark an imagined autarkic social system, but more important, are mapped onto the human genome.

As a result the community has an extremely isolated gene pool because the population that is currently in the United States descended from approximately fifty couples who came from

Germany. There are about "175,000 Amish in twenty-eight United States and Canadian provinces" (Cates 2005:371) and there are approximately 12,500 Old Order Amish living in Lancaster County, Pennsylvania (Kolata 1986). This is where numerous studies have taken place by many researchers from Massachusetts Institute of Technology, the University of Miami School of Medicine, and Yale University School of Medicine, and John Kelsoe and Janice Egeland were some of the most prominent scholars. It is also easier for people to locate a gene responsible for depression among the Amish because they do not use alcohol or drugs. Researchers also looked at the rates of suicide as a result of depression and the lack of violence within the community.

Scholars from various universities got together in order to figure out what was causing depression. The scholars who were investigating decided that a person needed to have four or five of the nine symptoms of depression in order to diagnose them as clinically depressed, which was a system derived from the classifications of biomedicine. The nine systems indicators are, "a disturbed appetite or change in weight, disturbed sleep, psychomotor retardation or agitation, loss of interest in previously pleasurable activities; inability to enjoy usual hobbies or activities, fatigue or loss of energy, feelings of worthlessness; excessive and/ or inappropriate guilt, difficulty concentrating or thinking clearly, morbid or suicidal thoughts or actions" (Stabb and Feldman 1999:1). Two or more of theses symptoms must continue for at least two weeks for a definite diagnosis of depression. The study showed that the Amish themselves saw that manic-depression had run in families and that, "it was in the blood." As it turned out, the twenty-six suicides that were reported since 1880 occurred in only four of the extended families. This has lead scholars to believe that, "manic-depression seems to be inherited as though it is carried by a dominant gene with incomplete penetrance, meaning that not everyone who inherits the gene develops the

disease" (Kolta 1986:2). This discovery of a possible link of a gene as the cause of depression leads to further investigation by scholars.

Many scholars from Yale University School of Medicine, The Massachusetts Institute of Technology, and the University of Miami School of Medicine, "found a genetic marker for a manic depression gene that is inherited along with the disease causing gene" (Kolta 1987:1). They stated that manic-depression could be linked to chromosome 11. This finding, however, proved to be false because the supposed depression gene carried by the Amish showed no link between the markers on chromosome 11 and depression. Thus, there could no longer be any serious consideration between the two (Barinaga 1989). They concluded that the Amish population alone does not have a particular link to depression found on chromosome 11.

What then is the cause of depression among the Amish? Scholars found the need to adjust their diagnostic tools so that they were sensitized to the attributes of both the Amish culture as well as their personalities. This led researchers to look closely at Amish engaging in excessive involvement in activities such as buying sprees, planning a vacation during the height of farming season, flirting with married persons, sexual indiscretions, reckless driving, racing, neglecting and abusing their horses and foolish business investments. These kinds of behaviors usually indicate the presence of mania. Thus, manic symptoms also manifest in culture-specific ways. Research was difficult because, "Amish observers were reluctant to report themes of grandiosity or expansiveness in relatives; such lack of humility was associated with sin rather than illness" (Cates 2005:380). Floersch et al. (1997:151) anthropologists Arthur Kleinman and Byron Good "are concerned to demonstrate that, though depressive illness may be rooted in human biology, it is not reducible to it; that is, culture must be seen as 'essential to the phenomenon itself.'"

In terms of illness, more specifically depression, the Amish have been very slow in accepting and/ or seeking out health care from any medical professionals. Traditionally, the Amish have received health care at home for any kind of physical or developmental disabilities, mental illness, or any other special needs. However they do believe that they can take things from the world that are good, so some Amish have sought out health care outside the home, but usually only on rare occasions.

The Amish are very strict in following the 1st century Biblical teachings. The accumulated Amish tradition and folklore serve as the most prominent guiding principles for The *Ordnung* binds the Amish, which is, "a set of rules for living" (Cates, 372, 2002). In accordance with *Gelassenheit,* the Amish value conformity and submission and in order to keep these ties they must maintain their close bonds between the self and the church. If a person is seen to be acting outside of the highly structured manner that both *Ordnug* and *Gelassenheit* lay out the Amish are expected to, and even pressured to, reconform this person. Their behaviors are ridiculed by the disapproval of the community in reaction to the way in which one acts. When comparing the Amish to the "English" it has been found that the Amish are more conscientious, humble and timid. The Amish also exhibit greater respect for their traditions. As a result of their greater respect for their traditions they hold on tight to their beliefs and rarely change their minds about them, thus adding to the root cause of depression by simply following their traditional belief system.

As stated by anthropologist Margot L. Lyon (1995:244) "culture is seen to mediate social processes and is construed as the course of real phenomena, that is, as determining the very structure and substance of human existence," and she continues, "within the cultural constructionist approach, our categories of thought (and thus the ideas we have), how we talk (and thus what we say), our experiences and feelings, and what

we express and do are primarily determined by the culture in which we live." Thus, culture acts as a guideline in terms of how we live. The Amish culture helps to shape how the Amish people communicate with each other and how they view their world. The Amish are taught from the time they are born not to draw attention to themselves in any kind of manner. As a result of this, some of the Amish are experiencing depression. They feel that they are not permitted to talk about what they are feeling because they would be drawing attention to themselves and if this happened they would be sinning because they would be drawing that attention that should otherwise be directed toward the greater good of the community and God. The Amish suppress their inner emotions to conform to the accepted cultural expression of emotion. Thus, the self and the ways in which people express themselves are seen to be primarily a cultural production. Therefore, it is very important to understand the context of the culture and how it shapes views about what is permitted to be expressed and what personal expression under any circumstance should be forever hidden away.

There are many cases of depression that arise when Amish adolescents are finished with their last year of school (eighth grade) at the age of sixteen. During this time they have the choice to either pursue their life as an Amish or leave their community and live as an "English." Many Amish begin to live their lives as though they were "English" by playing video games, driving cars, drinking alcohol, smoking tobacco, having promiscuous sexual relations etc. As a result during this time the Amish youth are exposed to a culture that is very different from their own and much more self focused. For their whole lives they were taught that to be involved with this culture is a sin. Therefore the Amish youth are confronted with conflicting cultures.

> Jonah was a fifteen-year-old Amish male referred to therapy for sexually abusing a female Amish neighbor…The boy felt uncomfortable with the Amish, and was actively seeking an entrance into 'the world'. As with most Amish, when Jonah turned 16 years old, he would enter a period in which he would be granted increased freedom in his life (often called by the Amish as 'entering the devil's playground). He would be free to make his own choices until he chose to be baptized into the church or leave the Amish entirely. [Cates 2005:375]

As the youth experience the conflict between the cultures of the Amish and the "English" and the emotions that they are allowed to express within each, it opens their eyes to a different kind of life; for some a new life with opportunities and dreams for their futures. It is important to take into account both the public and private domains of emotion. According to Margot L. Lyon (1995:246) "the public and private domains is the very point." The innermost emotions of individuals in the Amish society are very strictly shaped in order to coincide with their cultural and religious beliefs. On the other hand the "English" emotions are comparatively more or less freely expressed. There are far fewer limitations to the expression of emotions simply because there is not as much of a highly stratified belief system that subdues various emotional states. Another example of this is in regards to an adult male by the name of Andrew. "He left the Amish because of severe and unremitting depression. He sought help from his bishop and was told that sufficient faith would change his outlook… Andrew professed anger with his Amish background, and he felt it had 'robbed' him of much of the life he could have lived" (Cates 2005:382). Thus, Andrew went through the experience that the Amish culture was preventing him from living a life that he could have if he was not apart of the Amish community.

The task of defining depression amongst the Amish has been a long and treacherous battle because there have been

many different hypotheses trying to pinpoint a cause of depression. Some scholars were studying the Amish gene pools in order to find a gene that explained the locus of depression among the Amish. These studies were soon rejected simply because people saw that the Amish and their belief systems, as well as their culture were key factors in figuring out the cause of depression, so scholars searched elsewhere. Some scholars began to become more culturally aware of the Amish and their belief systems, which lead people to examine the Amish and their cultural and religious beliefs. Scholars began to take into account the differences between the Amish culture and the "English" culture in regards to the cultural construction of emotion. They found that the Amish are unlikely to express certain emotions because it would be drawing attention to themselves in a manner that is unacceptable within their culture. As a result, some of their emotions are never shown and instead are "bottled up," leading to depression among the Amish. It is very important when diagnosing people with depression to have a very holistic approach, which one can do by integrating both psychological and anthropological theoretical approaches in order to describe this phenomenon. By generating a better understanding between cultures and biomedical technology concerning mental health issues hopefully one day we can increase our knowledge with the hopes to find a culturally sensitive cure.

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Economic Formations and Buffalo: Lakota Interaction and Implications for the Ecological Restoration of the Northern Great Plains

James M. van Lanen

Abstract- *There is momentum building around a broad-based conservation movement for the ecological restoration of the Northern Great Plains with bison*[1] *being a vital component. In 2006 the World Wildlife Fund (WWF) identified the Northern Great Plains eco-region, along with such iconic places as the Amazon Rainforest, the Congo Basin of Africa, and the Galapagos Islands of the Pacific Ocean, as one of the nineteen most ecologically threatened areas on earth. As a "biodiversity hotspot" the Northern Great Plains now requires special attention. The Plains Bison, along with being a cultural and economic centerpiece for our First Nations, is a scientifically recognized keystone species of the Great Plains. It is the largest endemic mammal and its presence thus determines the ecological integrity of the region. Recent studies have been shown to link bison grazing with increases in plains biodiversity, specifically, the enhancement of native*

[1] Above I have used the term *bison*, from the scientific name for the Plains Bison *(Bison bison bison)* to describe what most Native Americans call *buffalo*. The names remain interchangeable, yet, because this article is anthropological, and thus attempts to provide an *emic* perspective, I will use the term *buffalo*.

plants used traditionally by aboriginals. Of approximately 500,000 extant Bison in North America 95 percent are privately owned. The implications being that ranchers manage those 95 percent for commercial purposes and the animals are correspondingly domesticated. The remaining 5 percent are publicly owned and considered wild. Yet the ability of those animals to live out the optimal biological patterns required to have a profound ecological impact is greatly restrained by the dominant economy and its concomitant landscape fragmentation. The Oglala Lakota Sioux indigenous of the Pine Ridge reservation in southwestern South Dakota are in a unique position to contribute to the overall outcome of this buffalo movement. Through an extensive analysis of existing literature on Lakota culture, socioenvironmental history of the region, and bison ecology I have developed a theoretical foundation to approaching this multifaceted project. Looking at economics on Pine Ridge I see buffalo projects being part of a "substantive" mode of economic integration where bison can not only play a significant role in cultural and economic revival for the Lakota people, but where attributes of Lakota economic institutions, religion, and ecological knowledge are conducive to the broader goal of ecological restoration on the Great Plains.

Value-Free Economics?

In pre-Columbian times the Sioux occupied "the woodland-prairie border zone of the upper Mississippi [*and*] relied heavily on gathering and hunting a diverse variety of plants and animals" (Isenberg 2000:35, emphasis added). In the summer months they would migrate into the grasslands to hunt buffalo. While the buffalo held iconic status among tribal culture, its use as a resource was not primary. Rather the Lakota employed a "conscious land use strategy" (Isenberg 2000:39) of resource diversity that acted to mitigate the effects of natural ecologic

fluctuations. Additionally, "by varying their production the Indians reduced the likelihood that they would overexploit any one resource" (Isenberg 2000:39).

Starting in the 17th century, when the Sioux began to be pushed westward by the coming onslaught of Euro-culture, their ability to practice a resource diverse economic strategy was forever altered. As an adaptation to colonial encroachment, the tribe dispersed into seven nomadic groups, the Lakota being one of these, as Sioux legend tells it, through the Seven Council Fires (Walker 1898). As a result of these "dramatic changes in their culture and society…[the Lakota] migrated to the Plains and developed an economic strategy centered on the buffalo and the horse" (Pickering 2000:2). Isenberg (2000:32) details the initial results of this forced adaptation:

> The rise of the nomadic, equestrian, bison-hunting Indian societies of the western plains was largely a response to…European ecological and economic incursion…Beginning in the early sixteenth century, European plants, animals, and germs invaded and often largely displaced indigenous ecological communities, helping colonists gain rapid and thorough control of the temperate regions of the New World…The cooperative character of European expansion included both ecology and economy. European biota and the European economy each facilitated the expansion of the other…The dual expansion of European biota and the European economy was a curse to most Native Americans because it abetted the European political conquest of North America.

Life on the plains implied that buffalo would take on a greater economic role for the Lakota. Domestication of the horse, introduced by Europeans to North America in the 16th century (Isenberg 2000), enabled a buffalo hunting strategy that proved to be far more successful than the pedestrian tactics of the past. From the late 18th century forward, buffalo provided the primary means for Lakota food, clothes, and shelter, thus as a material resource their role became one of an economic centerpiece.

Today, one could easily say that, for the Lakota, buffalo go far beyond being seen merely as an animal resource. Buffalo are a Lakota institution. According to the Oglala Birgil Kills Straight (personal communication, October, 2006) "everything about Lakota revolves around buffalo, the buffalo own us." Lakota religion has always revolved around the relationship with buffalo. Today buffalo meat continues to be used as food for traditional ceremony and social gatherings, and the buffalo skull continues to be placed at the entrance to the sweat lodge.

When a society's material means become embedded in cultural institutions those means becomes associated with values beyond what can be accounted for in the terms of formal economic analysis. Thus, following the ideas of Karl Polanyi, who "stressed the substantive instituttedness and social embeddedness of economies" be "distinguished between a formal definition of economics as rational, economising behavior and a substantive definition of economics as want-satisfying behavior," (Jessop 214:2001) I will suggest that contemporary buffalo restoration efforts on Pine Ridge operate on the premise that a substantivist mode of integration drives Lakota economic formations. Such an approach will serve to situate buffalo economics within the larger idea of ecological restoration, community capacity building, and indigenous ecological stewardship. It will establish a theoretical position that distances itself from market oriented buffalo projects and becomes embedded in sustainable use that is centered on concepts of ecological integrity. Contemporary ideas regarding the use and stewardship of buffalo in Lakota culture fall on the side of the former against a strictly market and capitalization motive. In hopes of achieving a viable ecological restoration, I suggest that lessons from this economic perspective be applied to the broad movement for ecological restoration of North America's largest native mammal.

Buffalo restoration for the Lakota is a complex issue. While a market-oriented component does exist and is partly warranted, buffalo represent a greater realm in Lakota culture. Consequently, it is necessary to avoid "the 'economic fallacy' in which all economic conduct is seen as formally rational and economising and the dynamics and properties are thereby assimilated to those of market economies" (Jessop 213-214:2001). Polanyi (1957:250) posited that "as an instituted process, the human economy…is embedded and enmeshed in institutions, economic and non-economic. The inclusion of the non-economic is vital. For religion… may be as important for the structure and functioning of the economy as monetary institutions". Thus, attempts to understand the economic situation for the residents of Pine Ridge, along with the role buffalo play in its matrix, should be approached from this substantivist theoretical perspective.

A Mode of Integration

The neoclassicist idea that human nature is essentially methodologically individualistic, that "individuals everywhere are rational optimizers…that economics is a universal science based upon the objective laws of the market and is applicable to every economy regardless of its level of development or its culture" (Gilpin 2001:52) is:

> …not true to the facts of anthropology and history…Price-making markets, which alone are constitutive of a market system, were on all accounts non-existent before the first millennium of antiquity, and then only to be eclipsed by other forms of integration…[t]he long periods of history when reciprocity and redistribution integrated the economy and the considerable ranges within which, even in modern times, they continued to do so, were put out of bounds by a restrictive terminology. [Polanyi 1957:257]

Jensen and Draffan (2004:208) reiterate this point: "traditional functioning human communities have from the beginning of

human existence been based on…exchanges where relationships are more important than goods…modern culture is organized around markets, where goods are more important than relationships." Lakota cultural institutions, such as kinship interaction, celebration and ceremony, along with the values of generosity, non-materialism, and mutual aid associated with those institutions, serve to provide "unity and stability" (Polanyi 1957:250) and the maintenance of relationships. Through the application of "adaptive strategies that make survival feasible within the constraints of the world system" (Pickering 2000:138) a predominate economic structure and function has developed on Pine Ridge that can be described as a substantive mode of integration (Polanyi 1957) with the following elements: (1.) *Householding,* (2.) *Reciprocity,* (3.) *Redistribution,* and (4.) *Market.*

Jessop (2001:214) describes householding as "based upon production to satisfy the needs of a largely self-sufficient unit such as a family, settlement or manor." Economic formations that emphasize self-sufficiency and mutual support between extended family members, called the *tiyospaye,* constitute the dominant means of livelihood for the Lakota. Householding "represents the smallest yet most widespread form of Lakota economic activity" an "estimated 83% of households…engage in some form of micro-enterprise" (Pickering 2000:44). Thus, "by maintaining various forms of household production for direct consumption, barter, and cash exchange, Lakotas can fill the often significant gaps left by the broader market-based economy in ways that confirm Lakota preferences, values, and styles" (Pickering 2000:47).

Wild resources occupy an important place in these modes of Lakota integration. The use of wild resources for subsistence, not only provides material means; it also uplifts spiritual, physical, and social well-being. Community events that provide meals and interaction continue to be a cornerstone of Lakota culture. It is often at these events where one can see

the use of locally procured plants and animals for ceremonial and food purposes. Wild resources are sometimes exchanged for cash, yet the motive behind most micro-enterprise activity is "to fill the short term needs of the entire extended family rather than to accumulate long-term assets for themselves or their nuclear families. To the extent savings are accumulated, they are used for community "giveaways" or public displays of generosity, not for direct personal consumption" (Pickering 2000:7). Honoring ceremonies, powwows, naming and adoption ceremonies, and memorials for the deceased all serve to cultivate a cultural environment for the practice of the Lakota's unique economic tactics. "The Lakota giveaway is an example of "reciprocal exchange" that "serves the function of cementing relationships, expressing mutual affection, and establishing a system of what the Lakota call 'Indian insurance'"(Pickering 2000:7). Hence, the predominate economic means for Lakotas is "a social safety net" (Pickering 2000:136) operating as a result of the long-term cultural traits of generosity, non-materialism, and community well-being.

Such cultural traits make interactions with the formal market unique for the Lakota. Because of a scarcity in natural resources, and constraints to economic autonomy implied by massive land fragmentation, no Lakota has entirely transcended interaction with the market system. A forced dependence upon monetization, compared to past generations of self-sufficiency and direct dependence upon the local land base, has "consistently fostered cash-based production and consumption to the detriment of subsistence production" (Pickering 2000:64). While wild flora and fauna are harvested as subsistence resources, householders also attempt to turn these resources into cash. Traditional wild plants used for food and medicine are sometimes sold at market prices. For example the wild prarie turnip, or *thimpsila,* is gathered and braided into sets of multiple turnips and sold on roadsides. Endemic animals used tradtionally by the Lakota are also pursued and

when taken the parts are sold to tradtional craft and clothing producers. Buffalo meat from the surplus animals of independent and tribal governement operations is also sold on the market. Other micro-enterprise entreprenuers create artwork, such as dream catchers and star quilts, for the market. Some have started small restaurants and shops.

Yet "Lakota small business people must learn to navigate both the mores of Lakota culture and the demands of the world economy. They are caught between the conflicting expectations of market exchange relations and Lakota social relations" (Pickering 2000:36). Many Lakota have a negative attitude towards individualist capital accumulation; such aims are in conflict with "culturally dictated social obligations" such as "generosity, being good to a relative, and taking responsibility for the group" (Pickering 2000:38) and present major obstacles to successful business on market terms. Cultural discord arises when some become financially successful through small business and become individualistic against the traditional practice of sharing. Such actors "are viewed as taking advantage of the community in order to enrich themselves" (Pickering 2000:38) which is antithetical to the traditional egalitarian principles of reciprocity and redistribution. 'Indian Pricing', where Lakota businesses "have different sets of prices, consisting of a sliding scale for Lakotas and a higher fixed price for non-Indians" (Pickering 2000: 40), and culturally derived economic motivations, which are distinct from mere cash returns, emphasize the Lakota focus on self-sufficiency and mutual support between extended families and the local community. There is a spritual foundation to generosity and an indiffernce to materialism and the accumulation of wealth that is not conducive to formal economies that are institutionally seperated and disembeded from extra-economic variables.

Capitalism and the "tendency of a market economy to extend its reach into society, disembedding individuals from

the wider ensemble of interpersonal relations, organizational affiliations, institutional and community roots, and broader societal frameworks within which they operate" (Jessop 223:2001) thus faces opposition on Pine Ridge. Householding and its various modes of integration mitigate the social, physical, psychological suffering imposed by the market system because "the pace and intensity of household production is controlled by the Lakota artisan...no outsider regulates the number of hours per day or items per week. Many household producers feel they are their own boss, free of the rigidities and mistreatment associated with wage labor" (Pickering 2000:56). Even so, the modes remain vulnerable to the market's powerful influence as household production becomes increasingly commodified and the producer's goals transition from household subsistence to income growth.

Such examples of traditional culture's inability to avoid massive change under the forces of capitalism are prevalent the world over. With the growing surge in buffalo restoration for cultural and economic renewal in contemporary Native America, the decisions made as to how the people go about the process will be detrimental to outcomes that either maintain the institutional embeddedness of alternative economies or succumb to a desire for capital accumulation that provides short term gain while instigating immense long-term consequences for both the Lakota and the buffalo. In 1887 the naturalist William Hornaday (1887:394) wrote of the buffalo being domesticated by Euroamericans for commercial ranching that "in captivity he fails to develop as finely as in his wild state, and with the loss of liberty he becomes a tame-looking animal. He gets fat and short bodied, and the lack of vigorous and constant exercise prevents the development of bone and muscle which made the prairie animal what he was." The people of Pine Ridge have the opportunity for re-applying buffalo to an already existing substantive economy as one of many holistic elements, rather than allowing the continued

evolution towards *bison domesticus,* and the buffalo becoming dominated by a single form of economic integration.

Tribal Buffalo Economy and Great Plains Ecology Today

Estimates of the plains buffalo population in North America at pre-Columbian times vary, but a rough estimate of 30 million head seems to be the established consensus (Isenberg 2000). "By the 1880's [*facing extinction*] a few hundred bison-the largest group of survivors in the United States-had found refuge…[*in Yellowstone National Park*]…from commercial hunters, drought, and the destruction of grazing lands by farmers and livestock" (Isenberg 164:2000, emphasis added). Ever since the episode of near extinction, and because of the historical relationship many Native American's share with buffalo, they have been among the most passionate advocates of buffalo restoration.

The idea to use buffalo projects as an effective mechanism for economic self-sufficiency and cultural renewal by tribes has been steadily growing and remains prevalent. The Inter-Tribal Bison Cooperative (ITBC), "a pan-Indian association consisting of over fifty tribes banded together to promote buffalo restoration on Indian lands" (Sherman n.d.1) is at the forefront of this movement. The focus of the ITBC is promoting the interests of herds operated by tribal governments that often desire market integration as a major component to their buffalo projects. Yet "operating quietly behind the scenes, mostly hidden from view is a growing number of individual tribal members engaged in the process of creating independent, grassroots herds" (Sherman n.d.1). Understanding the inclinations of these independent operators, their proclivity to the Lakota mode of integration, while foreseeing the relationship they have an opportunity to cultivate with the broader movement for restoring ecological

integrity to the Northern Great Plains bioregion, is a primary objective of this article.

From data obtained by Lakota wildlife biologist Richard Sherman's recently conducted "Buffalo Caretaker's Study" I extrapolated that the majority of independent operators on Pine Ridge pursue buffalo projects for reasons other than becoming 'successful' by the terms of a market economy. For instance, when asked, "how surplus animals are utilized?" (Sherman n.d.1) 75 percent of the respondents replied that utilization was oriented towards non-market oriented goals such as family consumption and ceremonial use. When asked, "What prompted you to raise buffalo?" (Sherman n.d.1) 68 percent of the respondents were motivated by non-market oriented goals such as the "return to a traditional diet," "restoration of buffalo to the land," "spiritual connections," and "educational" goals (Sherman n.d.1). Hence, there is a high level of subsistence use for the families involved with buffalo projects, including meat consumption, the use of animal parts for religious purposes, and the production of traditional arts and crafts. Therefore, we can posit that independent buffalo projects represent a valuable component to the substantivist mode of economic integration maintained by the Lakota. We can also posit that, rather than driven by capital accumulation, these operators are in pursuit of a substantive vision along the lines of what LaDuke (2005:210) terms a "recovery of the people." Through buffalo we are witnessing an economic, cultural, and ecological reclamation that "is tied to the recovery of food, since food itself is medicine: not only for the body, but for the soul, for the spiritual connection to history, ancestors, and the land" (LaDuke 2005:210).

The overlying ecological significance of the recovery process is the fact that prior to European colonization the Buffalo acted as the keystone species on the Great Plains (Nabhan and Kindsher 2006). In the pre-Columbian time period buffalo "modified both large landscapes and

microhabitats through differential grazing, especially in areas recently burned by wildfires; by wallowing; by tree rubbing and pruning the branches of woody species; and by their deposition of seed-laden, nitrogen rich feces and urine" (Nabhan and Kindsher 2006:2). Studies have shown that wallows significantly modify plains patch structure by diversifying soil surface, depicting ecological conditions in the recent past:

> Bison wallows develop as the animals paw the ground and roll in the exposed soil. Continued use of wallows by bulls, cows, and calves creates a soil depression of 3-5 m in diameter (and 10-30 cm in depth) that is devoid of vegetation…With vast numbers of bison that once occupied the Great Plains, these soil depressions were probably abundant and widespread features of the landscape. [Knapp et. al. 1999:45]

As microhabitat, buffalo wallows are significant catalysts for biodiversity enrichment and resilience in the plains ecosystem:

> Because of soil compaction, wallows often retain rainwater in the spring, create localized habitats that are suitable for ephemeral wetland species…In the summer, however, the same wallows support only plants that can tolerate severe drought…Consequently, at larger spatial scales, grazed prairie that contains bison wallows has higher plant species diversity than grazed prairie without wallows. Thus bison can physically alter grasslands in ways that increase environmental heterogeneity and enhance both local and regional biodiversity. [Knapp et. al.1999:40]

Accordingly, we can expect that reintroducing buffalo "to a more extensive area of short-grass plains…will no doubt enhance the spatio-temporal variation of plant cover…This in turn may increase the productivity and diversity of edible plants and small game available as food for the cultural communities residing in Bison Nation" (Nabhan and Kindsher 2006:2).

The term *Bison Nation* used by Nabhan and Kindsher (2006) refers to geographic areas within buffalo's historic range where the ecological processes associated with buffalo

grazing should once again be given an opportunity to take place. For the Lakota on Pine Ridge these processes would mean an increase in the availability of traditional plant food and medicine, forbs such as prairie turnip (*Psoralea esculenta,* or *thimpsila*), spiderwort (*Tradescantia occidentalis)*, wild plum (*Prunnus americana*), chokecherry (*Prunus virginiana*) and purple coneflower (*Echinacea angustifolia*), for sustainable community utilization. Knapp et. al. (1999:41) have found that buffalo concentrate their grazing efforts on grasses while allowing forb components that are "critical for the maintenance of high levels of biotic diversity" to prosper.

Today the Great Plains environment is dominated by commercial agricultural practice, especially cattle production, many of which are managed as free-range and grass-fed herds. The overall outcome of such production practices do have ecological benefits for grasslands and produce a healthier meat product compared to factory farm beef production, and despite some environmentalist misconceptions, "large ungulate herbivory *[such as cattle and buffalo]* can, and should, play a key role in the management and conservation of…grassland" (Knapp et al. 1999:40, emphasis added). Yet when compared to cattle in biological terms, buffalo have the ability to contribute to conservation objectives and ecological restoration in a more profound way. Environmental history points us to the initial ecological implications of cattle production in North America, where a process of ecological simplification initiated a decline in biodiversity on the Great Plains as European economic premises, agricultural practices, and exotic domesticated species supplanted native systems (Isenberg 2000). Unlike cattle, endemic to Asia, buffalo are the native ungulate of the North American Great Plains, and thus the ecologies of both the plains grasslands and buffalo have evolved and adapted in concert over millennia. The biological significance of that coevolving relationship is evident when

comparing the grazing behavior of buffalo with domestic cattle.

In a three year study Knapp et al. (1999:46) determined that "abundance and richness of annual forbs, and the spatial heterogeneity of biomass and cover, are higher in sites with bison than in sites with cattle." This is because buffalo "revisit grazed sites throughout the season, such that repeated defoliation of grazed plants is the norm and relatively sharp boundaries between grazed and ungrazed vegetation become evident" (Knapp et al. 1999:41). Also dissimilar from cattle, buffalo "tend to avoid forbs and woody species, which usually constitute less than 10% of their diet. Thus, within a bison grazing area, forbs are often conspicuously left ungrazed and are surrounded by grazed grasses" (Knapp et al. 1999:41). While grasses formulate the main component of buffalo diets, cattle present greater impacts to diverse plant communities as they consume higher proportions of forb and browse species. Buffalo also "spend less time grazing than cattle and more time in nonfeeding activities, and…strongly prefer open grassland areas for grazing, whereas cattle use wooded and grassland habitats opportunistically" (Knapp et al. 1999:46). Buffalo graze at approximately ½ the consumption rate of domestic cattle. Supplemental feed is usually not required for buffalo providing they have sufficient range, except for cases of extreme winter weather (Knapp et al. 1999). Buffalo wallow, whereas cattle do not, thus domestic cattle grazing cancels out the ecological benefits of wallowing. Buffalo also have positive impacts on nutrient redistribution and cycling through urine and feces. With buffalo grazing we can expect to see significant reductions in nitrate pollution in local watersheds, first because buffalo tend not to leisure in water sources, and thus defecate and urinate in them, as do cattle (Sherman, personal communication, July 2006) and second because replacing nitrate intensive production agriculture with buffalo grazing on large tracts of land will allow hydrological

restoration processes to take place (Nabhan, letter to author, January 2007).

Despite the immense benefits to ecological restoration discussed above we must not overlook the fact that "the spatial and temporal impacts of bison grazing activities caused by the historically large and nomadic herds are also best characterized as landscape-level forces. These…are difficult to replicate in today's fragmented grassland remnants" (Knapp et. al. 1999:47). Over the course of the 20th century the buffalo conservation movement's "legacy…was not to preserve the species as it had existed in the historic Great Plains, but to ratify the changes that Euroamerican conquest had wrought in the grasslands in the nineteenth century" (Isenberg 2000:187). In general, no matter how good-natured popular conservation ideals tend to be construed; colonial impact on the vital "landscape-level forces" of plains ecology has been noxious.

> Preservationism confirmed the nineteenth-century transformation of the bison from a species with continuous habitation of the plains to a fragmented population occupying disjunct 'island' habitats. The creation of refuges both limited the ability of the bison to seek new grasses and cemented the fragmentation of the bison population…Despite the introduction of cattle to much of the bison's former range, the eradication of the bison, whose grazing had favored the dominance of shortgrasses, allowed invading plant species to establish themselves in the western plains…Although the preservationists saved a few bison from extinction, the elimination of the species from most of its habitat transformed the western plains…By the end of the twentieth century bison keepers had largely domesticated the species. The eleven thousand bison in public herds were also constrained by the domesticated landscapes that surround them. [Isenberg 2000:187-189]

Therefore, the ultimate consequence of the segregationist view of the natural world incorporated by European enlightenment culture into buffalo conservation efforts was that the species was preserved "not as a functioning part of the plains environment, but as a functioning part of the American

economy: a curiosity, tourist attraction…and domesticated beast. This piecemeal and commercialized salvation owed itself to the limitations of an Eastern preservationist ideology based on nostalgia and recreation" (Isenberg 2000:192).

From here one can envision the crux of buffalo restoration in all its complexity. Nevertheless, if it is to be successful, a primary task of the broad-based movement for ecological restoration of the Great Plains is to counteract large-scale land fragmentation in the region. This should prove to be a daunting task. Yet, there are two significant features of the conundrum that I see offering great potential to overcome this prolific hurdle, the first being an overlying trend within the dominant culture of gross economic and ecologic instability.

The principle cause of Great Plains land fragmentation is private land and a concomitant agricultural strategy that is proving itself largely unsustainable. Despite the aridity and agriculturally incompatible ecological conditions of the region the ecologically imperialist Euro-colonial idea of progress has been force-fed on the Great Plains landscape. Yet plains' farming "was already failing in the late nineteenth century when oil and mechanization came along to keep it going by artificial means" (Kunstler 2005:293-294). Massive federal subsidies and "corporate exploitation of industrial production methods have…kept Great Plains farming on life support for decades (Kunstler 2005:293-294). The natural aridity of the region "has been compensated for in recent times with heroic amounts of irrigation…depleting underground reservoirs (aquifers) of what is essentially fossil water accumulated over the geologic ages and not subject to timely restoration" (Kunstler 2005:241-242). Hence the notably brief period of production agriculture on the Great Plains is "not likely to continue to function beyond the twenty-first century" (Kunstler 2005:242). Such a social and economic breakdown could prove to have very positive implications for land consolidation efforts as occupants of the region come to the realization that

their way of life is not working and attempt a process of adaptation to that actuality in a viable manner. Overlying this is the escalating potential for large-scale collapse of the U.S. economy, and its current agricultural systems, instigated by the mass depletion and peak in global production of fossil fuel energy sources. This article is not the format for a detailed discussion of the *peak oil* phenomena yet one is urged to review Kunstler (2005) and Heinberg (2005) for its extreme relevance to the subject being discussed here.

The second feature is the unique position Native Americans living on reservations lands are in to serve as the catalyst for land consolidation within, and eventually beyond, their borders. The Lakota now occupy some 2 million acres on Pine Ridge, 1.3 million of which are now designated public and private grazing lands. Because of the Lakota's extant passion for buffalo and, as discussed above, a cultural proclivity to a mode of economic integration that is not based upon individual maximization for short-term gain, I envision the potential for radical changes in land-use practice eventually leading to large-scale consolidation of buffalo grazing lands. In order to achieve the broad-range of benefits associated with buffalo restoration such a transition will eventually be mandatory. According to Cormack Gates (personal communication, December 2006), Chair of the World Conservation Union (IUCN) American Bison Specialist Group, the ecological benefits of buffalo restoration on the Great Plains would most likely begin to take formation in rangelands starting at 300,000 acres. Thus, through *tiyospaye development*, a movement towards devolutionary land consolidation on Pine Ridge (discussed in greater detail below), and the formulation of communal grazing associations, there is potential for buffalo pastures to evolve at beyond a 300,000-acre capacity in the future. Therefore it is essential that efforts at land consolidation become a primary action on behalf of those working for buffalo restoration. Nonetheless, Kunstler

(2005:294) predicts that, through the overlapping economic and ecologic trends of the current century, large tracts of land for buffalo will become inevitable, regardless of intense political effort and "will probably happen naturally as industrial farming ceases and more people leave. With automobile use on the wane, the region will become less accessible…Indians, and groups behaving in the mode of Indians, may eventually resume traditional ways of life there."

Such postulations might be viewed as romantic and unrealistic to some, yet regardless of how the situation eventually does play itself out, if one is serious about improving the livelihood of the Lakota and improving the ecologic situation of the Great Plains then one cannot deny that buffalo projects have the ability to be major contributors to large-scale projects for ecological rehabilitation, biological diversity enhancement, the restoration of ecological integrity, and building socio-ecological resilience. I would posit, along with others (Nabhan and Kindsher 2006:2), that these motivations are not only complementary but also interchangeable. The attainment of ecological restoration is tied to local human communities that are embedded in the optimal ecological conditions required for buffalo recovery. The adoption of buffalo management practices that have market-oriented goals as their locus, specifically the maximizing of herd carrying capacity on small plots of fragmented landscapes, will most likely present much different social and ecological results than those managed with ecological integrity and rehabilitation in mind. Buffalo managed for use in tune with the Lakota modes of economic integration outlined above present the possibility for situations much more conducive to broader socio-ecological goals. This is because the management and economic use of buffalo would be undertaken with Lakota historical and spiritual institutions in mind, with the needs of local ecology embedded in decision-

making. This is reminiscent of the vision Sherman (n.d.2) has for Lakota buffalo projects.

For Sherman (n.d.2) buffalo are the foundational component to a larger vision of autonomous land stewardship by indigenous people that includes the following operating principles: (1.) ***Indigenous Ecology****: Land and Habitat Maintenance, Restoration, and Reserve,* (2.) ***Subsistence Lifestyles****: Access to and Distribution of Resources*, (3.) ***Economic Self-Sufficiency****: Sustainable Harvesting*, and (4.) ***Connections to the Land****: Community Monitoring and Reporting*. These principles propose a goal-oriented approach to the conservation and use of natural resources that desires direct control of the ecological restoration process by the Lakota people. The vision implies local people being integrated into the maintenance of biodiversity and sustainable use of their land-base rather than conservation for recreation or visual spectacle common to the dominant culture. Unique is the empowerment of community members to become responsible for monitoring ecological conditions autonomously. This is at odds with the dogmatic and authoritarian aspects of mainstream natural resource management, which is inherently atheist, and thus does not formally recognize *traditional ecological knowledge* and promotes ignorance on behalf of the indigenous in regards to land autonomy. Yet it is just such a conservation paradigm, a situation where local people take direct control of their life-sustaining land base in a non-capitalization oriented approach, which might become the affective foundation for a broad-based movement of ecological restoration in the Northern Great Plains bioregion.

The Lakota people and their buffalo projects are in a special position to function as a catalyst for this needed change in economic perspective and land use. Sherman's (n.d.2) vision provides an example of objectives that can be applied to ecologically and economically marginalized communities the

world over who face great difficulties in becoming *successful* competitors in the current world-system. Yet the implications of the vision go even deeper into the heart of the social and ecological catastrophes looming over civilization as a whole. Lakota scholar Vine Deloria (1969:269) points out that "Indian people today have a chance to re-create a type of society for themselves which can defy, mystify, and educate the rest of American society." It seems plausible that the new ideas the dominant culture needs to overcome its dire socio-ecological predicament may not ever come from those of us almost hopelessly ensnared by its premises, but from those people who, because of their economically marginalized position in the world-system, have long recognized participation in it as futile, and have long understood vital components of human well-being that market-economies often make impossible to achieve. Through autonomous, communitarian indigenous land stewardship and efforts at buffalo restoration we can now envision somewhat of window towards future approaches to an *ecotypic* world-system.

Lakota Resistance to the Dominant World-System: "An Ongoing Dynamic"

In the early 19th century when the buffalo, who one hundred years prior were the center of the equestrian tribal plains economy, took on the central role in Lakota interaction with the world-system, because of a colonial demand for meat and hides, a historic dynamic began. In its early stage Lakota adaptation to nomadic equestrian hunting tactics could be described as:

> ...a *solar economy.* In the summer, the shortgrasses of the western plains transformed solar energy into carbohydrates, the bison transformed the grasses into protein, and the nomads assembled into large groups for their summer communal hunts. During the course of the summer hunts the nomads accumulated large amounts of meat, some of which they dried for

> future use. Because the nomad's economy ultimately relied on solar energy, it was renewable. Theoretically, the nomads confined their harvest of bison to the natural increase of the species, their economy was sustainable. [Isenberg 2000:68]

Thus, providing that regional ecological system's remained stable, free of massive drought or other climatic episodes, hunting by horseback may have been able to continue indefinitely. Yet, that practice would prove to be ephemeral as both Euroamericans and Indians were forced to progressively adapt to the premises of capitalism. In the 19th century Lakota buffalo hunting became indoctrinated into a relationship with market demands and increasing interaction with colonial traders. Lakota adaptation to firearm use and horse domestication greatly increased the ability to kill buffalo and therefore increased economic transactions involved with those kills. "As Lakota reliance on trade goods increased...buffalo herds decreased. The systematic and highly organized exploitation of buffalo for the fur and meat trade outstripped animal reproduction" (Pickering 2000:4). As the converging Indian and Euroamerican cultures capitulated to the demands of the growing capitalist world-economy and its drive for competitive short-term economic gain, the primary economic motivations of the Lakota were altered and the buffalo became unsustainably exploited. "Without the rise of industry in the nineteenth-century United States, the bison would not have become nearly extinct, nor would its current habitation of the plains be so scant and confined" (Isenberg 2000:196).

The deleterious effects of hunting buffalo for the commericial market did not go unoticed, but each of the cultures became locked into a dependency on the mass harvesting and trade in buffalo hides. "Like most questions about whether or how to conserve resources, the essential questions were about the distribution of wealth. Although it is in the interest of all to preserve common resources such as the bison, in a competitive economy it is in every individual's

interest to exhaust available supplies in the pursuit of private wealth" (Isenberg 2000:197-198). Vital insight can be gained from thoroughly recognizing the effects capitalism has on a culture's economic perceptions and motivations. Neither the uniqueness of Native American cultures nor the life sustaining biodiversity of the Great Plains was a concern for the proponents of capital. Progress as defined by capitalist ideals was primary. The triumph of economic growth was seen as *manifest destiny* and everyone and everything was considered expendable.

> The engine of advancement of Euroamericans into the plains was the ability of an industrial society to destroy thoroughly the bison herds and thus deny their use to the nomads...[some] saw it as a salient example of Euroamerican industriousness...[Indian] hide hunters extracted extraordinary wealth from the grasslands—even if most of them failed to keep that wealth for themselves...At the root of the failure to regulate bison hunting was the mid-century belief in economic competition. Everyone, Indian or Euroamerican included, was engaged in a race to exploit resources for individual gain. To reserve resources for anybody's exclusive use violated the competitive ideal; to reserve them for social outcasts such as Indians was unthinkable. Euroamericans waged a scorched-earth campaign against Indians who impeded the expansion of industry. [Isenberg 2000:163]

As buffalo became scarce on the plains the Lakota became discouraged and the colonizers took advantage of the situation their own economic way of life had instigated. A fight on the prairie, with an enemy who was driven by intentions completely foreign to the prior way of life, became inevitable:

> By and large the hunting economy was so entrenched that the destruction of the buffalo eliminated the economic base by which tribal alliances were cemented...Because buffalo and other game were so essential to the tribes, hunting areas defined the manner in which tribes would fight and where. It was fairly easy to divide and conquer the various tribes by exploiting their rivalry over hunting grounds. This, the white man did with deadly and consummate skill. Indian warfare was oriented toward protection of food

> supply and courageous exploits. Sustained warfare to protect or control territory which they could not settle was inconceivable to most of the tribes. Killing others simply to rid the land of them was even more unthinkable. Thus the white man's way of war was the deadly antithesis of the Indian's. [Deloria 1969:203-204]

Nonetheless "economic incorporation of local cultures into the world system is an ongoing dynamic that is subject to reversal and resistence" (Pickering 2000:138) and in 1876 the Lakota defeated Custer and the Seventh Calvary of the U.S. Army in the Battle of the Little Big Horn. It was a major event of the colonial expansion "that galvanized the Lakota Nation, placed the military strategies and leadership of Sitting Bull forever in the annuls of military history, and carved the U.S. military into a deep resentment toward the Lakota and all Native people" (LaDuke 2005:96). Then, in 1890, "more than 300 [*Lakota*] men, women, and children were killed by the troops of the Seventh Cavalry" (LaDuke 2005:88, emphasis added) during the Wounded Knee Massacre, another consequential event in U.S. history. Some have called the event a military attempt at revenge against the Lakota for the humiliating defeat of General Custer. In the 1970's, as a result of a revival of traditional ideas and resistance, Wounded Knee, or *Cankpe Opi,* would continue to symbolize the history of colonialism for the Lakota with the armed takeover of the Wounded Knee church and trading post by Lakota people and allies from the American Indian Movement [AIM].

Instigated by the "tribal chairman, Dick Wilson, and his so-called goon supporters [*who*] favored 'economic progress through cooperation with the government' structured through the Indian Reorganization Act [*IRA*] with BIA oversight" (Pickering 2000:89, emphasis added) the activists attempted to reinvoke the tragic history of dishonored treaty rights into the minds of the Lakota people and highlight the consequences of continued dealings with the federal government. With the IRA, enacted in 1934, the "reservation people were enabled to organize for purposes of self- government" (Deloria 1969:16)

and potential was opened for "tribal government as an avenue for devloping and exercising the tribal soverighnity that had rightfully been the people's all along" (Pickering 2000:116). Yet the effects of the IRA remain complicated and in some ways have led to the "undermining and dismantling the social, political, and religious institutions of the Lakotas" (Pickering 2000:116). The occupiers of Wounded Knee "identified the reservation tribal government as a puppet of the United Sates, the latest version of the 'treaty chiefs' paraded before them" (Pickering 2000:116). The very incomplete history of Lakota resistance to the world-system told above affirms the ongoing sprit of the Lakota and the extant commitment to the struggle for self-suffciency and a future defined by their own terms.

Mitakuye Oyas'I, a saying that often ends "prayers, speeches, and editorials" (Pickering 2000:6) is Lakota for "all my relatives." Relatives are not limited to an anthropocentric meaning and can include many specters of the natural world, for instance buffalo are considered "relatives" and the rocks used to heat the sweatlodge are called "grandfathers." Relations with the *tiyospaye*, the original mode of Lakota clan organization, or "a group of households, consisting of relatives by blood, marriage, or social convention" (Pickering 2000:2) continue to constitute the principal relationships necessary for physical and social survival. Yet "most of the *tiyospaye* have been through numerous shifts in location and membership since reservation residence, as U.S, policies of land allotment, treaty annuity distributions, and relief projects created local political tensions" (Pickering 2000:6). Hence, the bonds of the extended family and their ability to support one and other have, in many ways, been enervated. A process by which land was "allotted and stolen piece by piece from under them" (Deloria 1969:49) is at the heart of Lakota alienation and dependency.

Beginning with the *Act of March 3, 1819 (3 Stat 679)* entitled "An act making provision for the civilization of the Indian Tribes adjoining the frontier settlement" with the goal to

"employ capable persons of good moral character, to instruct them in the mode of agriculture suited to their situation" we witness the legal tactics of the world-system stipulating its ultimate ends. Deloria (1969:45, emphasis added) notes that "all subsequent legislation [post *3 Stat 679*] has revolved around the congressional desire to make Indians into white farmers...since Indians have not become successful white farmers, it is perfectly correct to take their land away and give it to another who will conform to Congressional wishes." While in 1887 Indian tribes still controlled nearly 135 million acres, the *General Allotment Act*, or *Dawes Act*, was initiated, according to Deloria (1969:46):

> ...to make the Indian conform to the social and economic structure of rural America by vesting him with private property. If, it was thought, the Indian had his own piece of land, he would forsake his tribal ways and become just like the white homesteaders who were then flooding the unsettled areas of the western United States...But there was more behind the act then the simple desire to help the individual Indian. White settlers had been clamoring for Indian land.

The situation was further compounded in the early 1900's by the *Competency Act.* "Whenever Indian land was needed, the whites pictured the tribes as wasteful people who refused to develop their natural resources. Because Indians did not 'use' their lands, argued many land promoters, the lands should be taken away and given to people who knew what to do with them" (Deloria 1969:10). The *Competency Act* stupipulated that if the individual Lakota was determined "incompetent" to use the land alloted to him in a "productive" manner, the land in question be held by the federal government in trust. "Eventually any decision made by an Indian was casually overlooked because the Indian was, by definition, incompetent" (Deloria 1969:31). While the Lakotas deemed

"incompetent" were allowed to live on the allotment, to use the land was forbidden by trust restrictions, and the "right to use" mostly went to non-indian cattle grazing leasees. Deloria (1969:47-48) explains how ponderous amounts of alloted land slipped out of Indian hands:

> By 1934 Indians had lost nearly 90 million acres through land sales, many of them fraudulent. The basic device for holding individual lands was the trust, under which an Indian was declared to be incompetent. Indians were encouraged to ask for their papers of competency, after which the land was sold for a song by the untutored Indian who had never heard of buying and selling land by means of a paper. Many Indians sold their land for a mere fraction of its value...Gone apparently was any concern to fulfill the articles of hundreds of treaties guaranteeing the tribes free and undisturbed use of their remaining lands.

While today "many Lakotas own some land, the orginal individual land allotments made on Pine Ridge...between 1889 and 1910 have been fractionated through subsequent generations of heirs...The small parcels of individual trust land tend to be insufficient to support a ranching operation" (Pickering 2000:129). The result for those Lakotas who wish to start a buffalo operation on their land, providing the land is not under trust restriction and locked into a non-Indian lease, is that there is not enough space sufficent to bring on buffalo. To have sufficient land for an operation most buffalo entreprenuers must attempt to lease supplementary acreage through the BIA or face capitulation to leasing their own lands out to other operators. Also, through a combination of hiership fractionation and the minimal grazing fees charged by the BIA, Lakotas receive very little cash income for leasing their allotments to non-Indian agricultural interests. As well, It is often said that the non-Indian rancher cares little for the land he rents, loads it beyond carrying capacity with cattle, causing detrimental ecological conditions and intensive damage to native plant communites and watersheds.

The response by Lakota activists is a call for *tiyospaye development*. The idea is to get a fix on how much land a *tiyospaye* owns in aggregate, determine the geographic locations, and, through a process of trading, consolidate the land into its greatest possible acreage. From here a *tiyospaye* hopes to put the land into family stewardship and self-sufficent use in order maintain itself through cultural practices and supplment its other sources of cash income. Starting a herd of buffalo is a strong desire in the movement for *tiyospaye development* and getting these projects up and running would provide an essential component to the broad-based goals of buffalo restoration and ecological rehabilititation discussed in this article. Yet, overcoming the hurdles of BIA buerocracy is immensely difficult. Getting one's land out of lease has proven very complicated and consolidating land will be a great challenge for the future of this movement. It is a situation where "the bulk of the treaty lands retained by the Lakotas have worked for the economic enrichment of non-Indians ranching on leased parcels of Indian land" (Pickering 2000:130). Breaking free from that system and directly interfering with the livelihood of the anglo ranching tradtion will not be easy. "Unless the political power to define need shifts toward these Lakota communities, economic development that will benefit reservation residents will remain out of reach" (Pickering 2000:139). For the Lakota to obtain these goals, and for there to be an ecological restoration of buffalo, there will most likley also have to be great changes in the operating principles of the current world economic system.

Conclusion

For Deloria (1969:265) Indian "problems are legal, not cultural." Not every human culture was meant to evolve under capitalism, nor does every human culture desire such an economy now. Yet, people with their own values and their

own interpretation of human well-being get locked into a self-reinforcing process whereby "market forces and profit-seeking…come to dominate society…[*and*] neoliberalism… commodifies political, educational, health, welfare, scientific and other activities to organize them as businesses oriented to exploiting opportunities for profit without regard to possible extra-economic costs and benefits" (Jessop 219:2001, emphasis added). Such a process, as we have learned above, also has detrimental effects on ecologic systems and the potential for sustainable relationships between ecosystems and human communities. In many ways the Lakota have avoided that absolute state of social disembeddedness. They "continue to struggle with laws not of their own making, economics derived from the theft of land and life, and the scars that remain with the victims of horrendous crimes…through it all, the people and the land remain" (LaDuke 2005:91). When the world-system eventually comes crashing down because of its complete social and ecological disconnect it would do good to think about the Lakota's institutional embeddedness and economic mode of integration. Hopefully, at that time there will be more buffalo "restoring spiritual practices related to foods, while strengthening community health and self-determination," (LaDuke 2005:191) so that the dominant culture can witness an example of local ecology forming the centerpiece of a cultural institution by which a sustainable economy operates. Deloria (1969:263) prophesized that one day "Indians will become fiercely independent of federal sources of funds as they exercise their new-found ability to operate as an independent force…Indians will embark on a new series of community development projects that are based upon new concepts of tribalism." However, he warns, "the feasibility of such colonies is very much dependent on the rejection of the consumer mania which plagues society as a whole" and that it would be up to the Indians "to determine whether continued treadmill consumption of luxuries was equal

in value to a more leisurely and relaxed life" (Deloria 1969:264).

The economic and social experiment conducted by the purveyors of the world-system on the Lakota and the natural systems of the Great Plains has proven its own hypothesis untrue. From the judgment of this article it seems that grand efforts to *develop* Pine Ridge in terms of the market system are futile. *Tiyospaye development* based upon buffalo stewardship where Lakotas can apply their substantive heritage to a socio-ecologically resilient land based economy needs to be given full attention so we may begin to answer vital questions. Can the Lakota obtain the political autonomy to "retribalize, recolonize, and recustomize," (Deloria 1969:265) to prove themselves, and set the example with buffalo? Would such a model help those of us dependent upon the premises of the dominant culture decide for ourselves if continuing to run on the economic treadmill on which we are placed is in our best interests as human beings and in the best interests of the local land bases we rely upon? I propose that thorough research needs to now be dedicated to the concept of *tiyospaye development* and to assessing the legal, political, economic and social feasibility of land consolidation so that we may further understand what is possible.

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II. Original Research

SCRATCHING THE SURFACE OF PREHISTORY IN NORTHWESTERN WYOMING: AN ANALYSIS OF THE DYNAMICS OF SITE FORMATION AND ALTERATION IN AN ALPINE SETTING

Ryan Patrick McElhoe

Abstract- *Upon discovery, archaeological sites are often not in a pristine condition. They likely have undergone several transformations following their original development. If not accounted for, these transformations can cloud site interpretations. To gain a better understanding of the interplay between hunter-gatherer ecology and landscape dynamics in the Rocky Mountains, this research analyzes cultural materials from a surface artifact scatter on a site (48PA2874) in the Absaroka Mountain Range, northwestern Wyoming. Located at approximately 3100 meters in elevation, the site contains 2471 chipped stone artifacts and diagnostic artifacts ranging in age from the Paleoindian through Late Prehistoric periods. A 100-x-100 meter grid surrounding a sag pond (depression filled with seasonal snowmelt and rainfall) is examined for patterns indicative of cultural and geomorphic processes. This study examines colluvial, fluvial, and cryoturbation events and evaluates their contribution to the cultural landscape.*

Landscape occupation patterns are discussed and temporal occupation zones are analyzed. The objective of the study being to determine the context of the artifact deposits; that is, do the deposit contexts imply cultural deposition or geomorphic disturbance? This research aids in an interpretation of the site and in a broader sense, site dynamics relating to alteration of cultural remains. This analysis will add to the understanding of the processes affecting archaeological sites located in alpine zones, allowing for more accurate interpretations of these sites.

The Site

Site 48PA2874 is located in the Absaroka Mountain Range, northwestern Wyoming. At an elevation of 3100 meters above sea level (m asl) this site is in an alpine setting, which makes it subject to specific geomorphic processes such as *frost heave*. The site is situated on hummocky landscape formed by a Pleistocene mass wasting event. This Pleistocene slump is the source of many stones encountered in the southernmost excavation unit designated T26 (Figure 1) (Gingerich et al. 2006). These stones greatly affected our ability to excavate and as a result we were not able to get as many levels of sediment sifted as we did in the northernmost unit designated U27 (Figure 1). Despite having sifted fewer levels in the T26 unit in comparison to the U27 unit, the T26 unit contained 349 artifacts while the U27 unit only contained 45 artifacts for a much greater depth of sediment removed and sifted (Svatos and Todd 2006). This suggests that sediments are moving downslope into the U27 unit as it is positioned on the edge of an ephemeral sag pond which is at the core of the site. The Pleistocene slump has several of these small seasonal ponds that would have provided adequate water to humans and animals in the past. As Gingerich and colleagues (2006) have noted, the U27 excavation unit has a higher percentage of sand

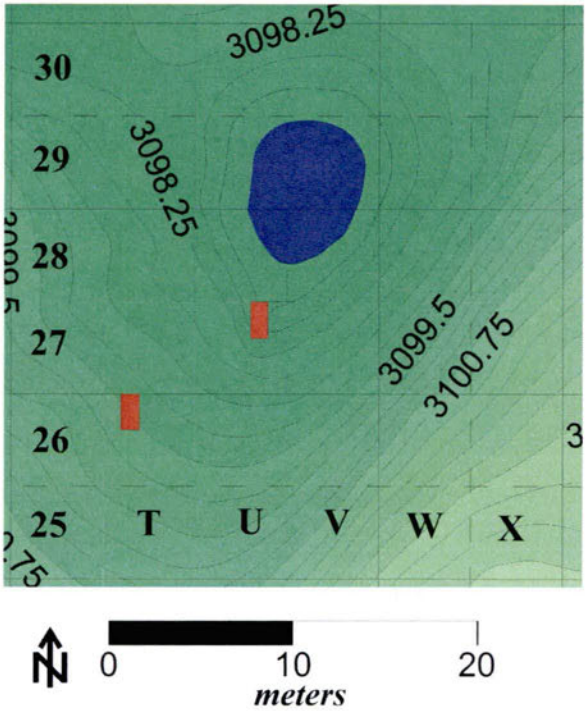

Figure 1. A map displaying the locations of the T26 and U27 excavation units (red boxes).

and clay than the T26 unit does suggesting downslope movement of sediments, while rocks and more artifacts remained upslope. These data in addition to spatial data from the surface scatter on 48PA2874 will be interpreted with the use of both cultural and geomorphic processes.

This region of the Absarokas was occupied throughout the Holocene. The hummocky landscape provided good sources of water due to the formation of sag ponds, which may have been one of the resources that led to multiple reoccupations of the area. Early Native American use of the area over a long period of time is evidenced by the diversity of projectile points found on 48PA2874. This site in particular lacks clear temporally distinct occupation zones: it is an amalgamation of several traditions ranging from the Paleoindian through the Late Prehistoric (a nearly 10,000 year time span). There is a lack of definitive Early Archaic projectile points on the site, which may mean that the site was

not used, or used differently during the Early Archaic period. This is in sharp contrast to one existing theory that the plains were vacated during the Altithermal period and that the mountains served as a refuge zone for people (Bender and Wright 1988:620) since the Altithermal coincides with the Early Archaic period. Thus if people were occupying mountainous territory such as 48PA2874 during the Altithermal, one would expect to see an increase in diagnostic artifacts rather than the decrease observed here. Every other period of North American prehistory has left its mark on 48PA2874, each temporal occupation overlapping the previous one on those areas of the site like ridgetops with little deposition. The surface exposures of the site lack crisp clear zones of temporal occupation (Figure 5) most likely due to restrictions of the landscape causing people to coalesce near the sag pond. However, given that deeper sediments with buried materials have been documented through limited test excavations, the possibility exists that additional excavation may provide stratigraphic separation of some occupational events.

2471 pieces of chipped stone are scattered across the site according to site mapping data from 2005. This fact alone makes this large site worthy of examination for patterning as it provides an adequate sample size. The basin shape of the site (Figure 2) in an alpine setting provides bone chilling temperatures on gradients that could potentially enable certain geomorphic processes to occur resulting in a clouded interpretation of the prehistoric cultures that once inhabited this mountainous ecosystem. Figure 2 displays a 7.5 meter change in elevation across a linear distance of 80 meters. Investigation of alpine-specific geomorphic processes coupled with other biological and cultural research programs will ultimately provide a basis for determination of hunter-gatherer behavior patterns in high altitudes. Only an interdisciplinary research

program can answer questions about prehistoric ecology in this varied landscape.

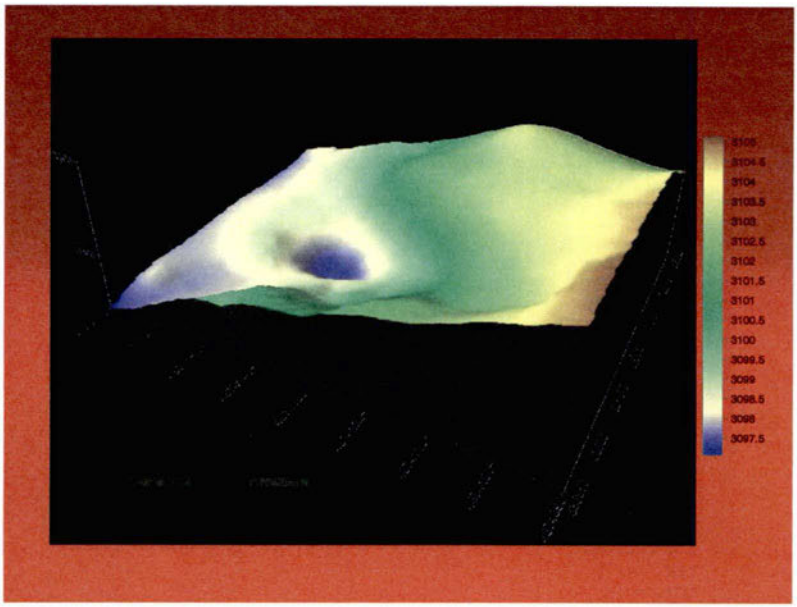

Figure 2. A 3-dimensional topographic map of site 48PA2874.

The Study

The investigation of spatial patterns requires an unbiased and standardized approach. Using the pond center coordinates as the central coordinates, a 100-x-100 meter area (hectare) was constructed. This hectare was examined for spatial patterns among the surface chipped stone artifacts it contains (which comprise 54 percent of the total site assemblage). The hectare was further broken down into 10-x-10 meter units. The parameter of the artifact assemblage that was chosen for this study was artifact maximum length (MLEN) measured in millimeters. This parameter was chosen because it provides the best estimate of overall artifact size as data on density and

volume information were not recorded. The overall size is important for geomorphic research because geomorphic processes often sort objects based on there size. Geomorphic processes have been noted to sort soils (Benedict 1970; Fanning and Holdaway 2001), clasts (Benedict 1970), stones (Benedict 1970), bones (Byers 2002; Rick 1976), and artifacts (Byers 2002; Fanning and Holdaway 2001, Rick 1976) based on their size. Within each 10-x-10, the mean MLEN, maximum MLEN, minimum MLEN, and the sample size were calculated. A contour map was generated for spatial analysis (Figure 3). This graphic displays some interesting patterns worthy of investigation. In order to interpret the findings more accurately, an understanding of the geomorphic processes that could be contributing to the pattern's formation is necessary.

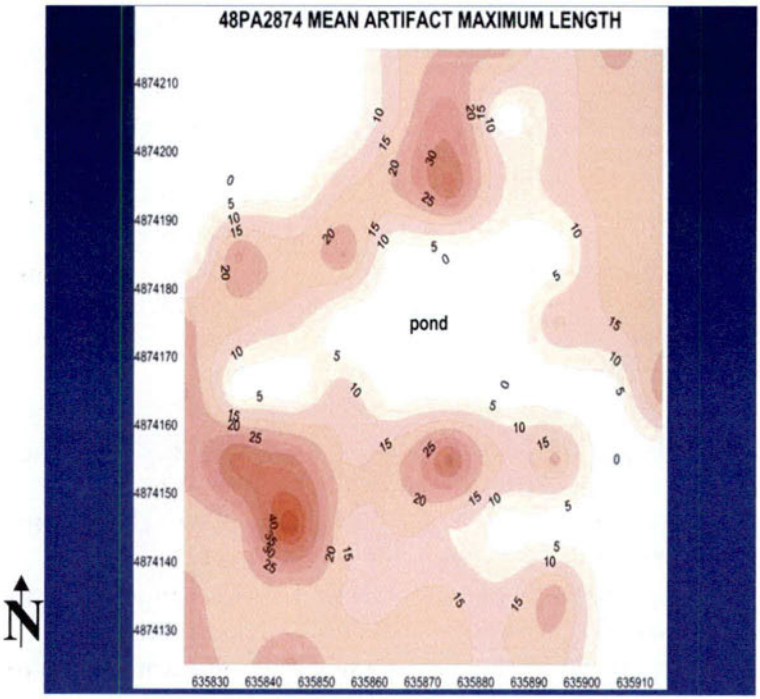

Figure 3. A contour map showing the mean artifact maximum length in millimeters across a hectare on 48PA2874.

Geomorphology in Alpine Settings

There are three families of geomorphic processes that could potentially disturb the artifacts on the site. *Cryoturbation* processes (soil disruption during freeze thaw) such as *frost heave*, *frost creep*, *needle ice*, and *solifluction/gelifluction* can disrupt soil horizons and displace artifacts. *Fluvial* (hydrological) processes such as slopewash, *overland flow*, and stream flow can size sort artifacts. *Colluvial* (gravitational) processes such as *solifluction* and downslope movement can also affect assemblages.

Microclimatological data on the site are not currently available. Climatological data from the nearest station, which is at a considerably lower elevation in the foothills at the western margin of the Big Horn Basin, (Western Regional Climate Center 1963-2005) suggest average annual temperatures ranging from 12.9°C to -4.3°C, annual precipitation of 35.7 cm, and annual snowfall of 164.6 cm. These data verify that the site does in fact get cold enough to freeze during winter and there is sufficient moisture to aid in the production of geomorphic processes. These temperatures are expected to be exaggerated on the colder end of the spectrum as the site is located at a much higher elevation than the weather source that these data were generated from.

Cryoturbation Processes

Frost heave is defined as expansion of the ground surface due to ice formation in the soil. The amount of heave is proportional to the thickness of the segregated ice layers that form in the freezing soil (Benedict 1970:170; Bowers et al. 1983:562). Benedict (1970:188) notes heave amounts of up to 36 cm! Movements of objects are largely due to the nine percent volume change that occurs when ground water turns to ice (Bowers et al. 1983:562). Bowers et al. (1983:553,555)

states that *frost heave* is one of the dominant forces responsible for dispersal of archaeological assemblages at their study area, which is located at a latitude of 63 degrees and an elevation of 773 m asl. While this site is 19 degrees higher in latitude, the elevation is significantly lower than the site of focus in this study, thus *frost heave* may occur on site 48PA2874. *Frost heave* is only important in soils that contain sufficient fine-textured material that permits water to move upward to the base of the frozen layer (Benedict 1970:170). The result of *frost heave* is *frost creep* which is defined as the net downslope displacement that occurs when the soil expands normal to its surface and settles in a more nearly vertical direction. This occurs during a freeze-thaw cycle (Benedict 1970:170). Benedict (1970:170) notes that *frost creep* is further broken down into two components: potential *frost creep*, and *retrograde movement*. *Potential frost creep* is the downslope displacement caused by frost heaving during the fall and winter freeze, and *retrograde movement* is the apparent upslope displacement caused by non-vertical settling during the spring and summer thaw (Benedict 1970:170). *Frost creep* has estimated soil movements of .8 mm-30 mm annually in Colorado alpine zones (Benedict 1970:201,180). The 30 mm measurement refers to potential *frost creep* (Benedict 1970:180), revealing its ability to cause extensive downslope movement. *Frost heave* and *soil compaction* can size sort stones (Benedict 1970:206) and artifacts (Byers 2002:437) vertically. *Soil compaction* can displace an entire assemblage downward, though small artifacts (< 2 cm) experience greater downward displacement than larger artifacts (Byers 2002:437). The result is a stone/artifact heavy horizon on top of a stone free fine-textured horizon. Stone/artifact free horizons are optimum conditions for *frost creep* to occur (Benedict 1970:208). In Colorado alpine zones *frost creep* is the dominant movement process on upper, middle, and lower slopes (Benedict 1970:223).

Needle ice is vertical ice crystals that are visible on the ground surface (Matsuoka 1998:122). These crystals can also occur just below the surface (Bowers et al. 1983:562). *Needle ice* is important not as much for its ability to size sort but rather to disrupt soils and artifacts. *Needle ice* can lift cobble-sized stones weighing up to 15 kg (Bowers et al. 1983:563). *Needle ice* tends to bend during thaw which causes rotation of soil grains resulting in annual downslope displacements of up to several decimeters (Matsuoka 1998:122). The lifted soil grains roll downslope in some cases with the effect being increased with an increase in slope gradient (Matsuoka 1998:131). Grains loosened by *needle ice* are also susceptible to wind transport (Matsuoka 1998:124). When transported to lower slopes, these loosened grains can serve to bury artifacts, thus altering what is visible on the surface for archaeologists to record.

Solifluction is defined as slow flowing from higher to lower ground of masses of waste, saturated by water. This definition does not restrict *solifluction* to a periglacial environment, and terms such as *gelifluction* are sometimes used for *solifluction* operating over frozen subsoil. This process is favored by an impermeable substratum (frozen ground) which limits downward movement of water through the soil. *Solifluction* is most effective when thawing ice layers weaken soil. The melting ice serves as a source of excess water that reduces internal friction and cohesion (Benedict 1970:170). Benedict (1970:170) states that although spring thaw saturates much of the alpine region on Niwot Ridge (located in Colorado), *solifluction* occurs only in areas where the water table remains high enough during fall freeze to permit thick ice-lens development. He further mentions that *frost creep* and *solifluction* commonly operate together; however *solifluction* is restricted to specialized saturated microenvironments (Benedict 1970:170, 223). On lobe 499, Benedict (1970:180) found that in saturated areas, *solifluction*

was most important, while *frost creep* was the only process to occur in drier soils.

Benedict's study area is located at 40 degrees of Latitude in an alpine setting. As the Absarokas are farther north in comparison they are presumably colder, thus whichever *cryoturbation* processes occur in the Colorado Front Range should also occur in colder climates in similar elevations if all else is held constant (slope gradient and moisture). As *frost creep* is a process favored by saturated conditions (Benedict 1970:170), it may be operating on the slopes of the ephemeral sag pond on site 48PA2874. If *solifluction* occurs on 48PA2874, it is restricted to the most saturated locations. Perhaps the slopes toward the pond bottom are saturated enough, however shallow water table depth is a prerequisite for this process to occur. Data for water tables on 48PA2874 are not currently available. Benedict (1970:191) recorded minimum *solifluction* movements ranging from 0 mm to 22.0 mm on lobe 45 illustrating *solifluction*'s ability to cause rapid downslope movement. *Solifluction* is a downslope movement process that lacks conspicuous sorting (Benedict 1970:215).

These *cryoturbation* processes commonly operate together making detection of each one's contribution difficult. *Retrograde movement* and *solifluction* co-occurring can make the contributions of each unknown (Benedict 1970:189). As these two processes can serve to counteract each other, results can get clouded. The effects of these processes are largely based on slope gradient and available moisture (Benedict 1970:195, 220). In environments with comparable moisture availability, movement rates tend to increase as the angle of slope becomes steeper (Benedict 1970:214). Benedict (1970:203) mentions that the scarcity of autumn moisture at one of his research sites contributed to low rates of downslope movement. Maximum rates of downslope movement are limited by the depth to the water table at the beginning of the

fall freeze. Abundant moisture at the beginning of the fall freeze is required in order for *solifluction* to occur, at least in the Front Range (Benedict 1970:213). Benedict's research provides a good comparative study as the Colorado alpine zone is predicted to be analogous in terms of climate to the alpine zones in the Absarokas. Thus, *solifluction* is predicted to have a minor (if at all) contribution to site disruption, while *frost creep* is expected to occur to a degree that is uncertain.

Fluvial Processes

For the purposes of this research, the important *fluvial* process that could serve to size sort artifacts is *overland flow*. Fanning and Holdaway (2001:671), state that gradient is important in this case as well mentioning that *overland flow* can contribute to longer potential transport distance on steeper gradients. Fanning and Holdaway (2001:682) presume that for locations similar to their research area (which is in Australia) on slopes of less than five degrees, inter-rill entrainment has little effect on artifacts more than 20 mm in maximum dimension. This location has been severely eroded due to animal grazing and vegetation coverage is naturally discontinuous. On site 48PA2874, the principles of physics remain the same however vegetation coverage is relatively continuous, thus inter-rill flow may have a less severe affect on the site than it does on Fanning and Holdaway's research area. On gentle slopes archaeologists can largely ignore the effects of postdiscard movement of artifacts by geomorphic processes such as inter-rill flow. This result challenges the perception of a fundamentally disturbed archaeological record that is of little use in reconstruction of past human behavior (Fanning and Holdaway 2001:672). The importance of this process to sites such as 48PA2874 is that artifacts can be sorted by *overland flow*. Smaller particles are more easily entrained by *overland flow* and travel farther than larger particles (Fanning and

Holdaway 2001:681). Rick (1976) also concludes this throughout his analysis. Byers (2002:426) mentions that experimental research demonstrates that *fluvial* action of sufficient intensity and duration differentially transports skeletal elements sorting them by size, weight and shape. Long axes of skeletal elements tend to align parallel with or perpendicular to the direction of force when subjected to *fluvial* action of sufficient intensity (Byers 2002:428). As bones become incorporated into the lithosphere via taphonomic processes, they should behave similarly to lithics of the same mass, size, and shape under the influence of geomorphic processes. *Fluvial* processes are also important as they can cloud sites with introduced materials such as sediments, floral and faunal remains, and artifacts and ecofacts (Rick et al. 2006:573).

Colluvial Processes

As slope gradient impacts both *cryoturbation* and *fluvial* processes, it is apparent that gravity plays a key role in both the production and magnitude of these processes. Rick (1976:139) notes that at Ccurimachay (rockshelter site in Peru), the processes which carried materials downslope must have depended on gravity for most of their motive force. At the time of deposition, an object may move under the force of gravity or it may need a further impulse to begin downslope movement. This impulse can come from things such as: *fluvial* processes, eolian (wind) processes, and disturbance from humans and animals (Rick 1976:139). Rick's (1976:142) research concluded that at Ccurimachay, average lithic weight increased as slope decreased. Weight and density seem to be the determining variables in this relationship. This relationship seems to hold true with two underlying requirements: a minimum slope, and a minimum weight or density (Rick 1976:142). Under these conditions lighter objects will come to

rest on steeper slopes, while heavier objects will continue toward gentler slopes (Rick 1976:143). When concerned only with downslope movement processes, the lightest and least dense materials will better reflect their original distribution than will the heavy, denser materials (Rick 1976:144).

Movement Processes on 48PA2874

How could these different geomorphic processes affect the site this research is focused on? *Frost heaving* can serve to sort objects vertically. Sorted blocky debris that is rapidly moving is characteristic of a *frost-creep* environment (Benedict 1970:216). This could paint a sorted mosaic across the surface of the site if in fact these processes were at work on the site. Rapid movement of fine material relative to coarse debris is characteristic of a *solifluction* environment (Benedict 1970:216). If this process is at work on the site, a non-sorted fine grained material would be expected to move downslope. *Fluvial* processes differentially sorting artifacts based on their size would be evidenced by smaller lithics occurring at a higher percentage on lower slopes. The reverse would be true for *colluvial* processes (given there is a steep enough slope gradient). In addition to the various patterns that could be seen is another important factor: differential deposition across the site. The movement of sediments across the site can serve to both bury and expose artifacts. *Needle ice* can disrupt soil grains providing another mechanism for artifact burial. This affects what is recorded and the data that are interpreted for these processes. Surface materials that have moved down steep slopes may be subsequently buried by silt and organic matter that wash down from above (Rick 1976:141). The northern pocket gopher (*Thomomys talpoides)* disrupts sediments in the area that could feed into the sag pond and build up on the lower slopes of 48PA2874. Rick et al. (2006:576) note that animals

can act as agents of geomorphic change, causing erosion, trampling, and ultimately landscape evolution.

Patterns Across the Hectare

Using the provenance data collected by the 2005 field school, locations were determined for various assemblages across the hectare. The mean artifact maximum length (measured in millimeters) was used for the basis of pattern recognition. If there is a pronounced organized pattern on the hectare, it should be evidenced by size-sorted clusters varying in distance from the pond (the lowest elevation in the hectare). The geomorphic process that serves to pattern the assemblage is the determining factor in which size means occur closest to the pond, and which sizes occur farthest away. Figure 4 displays locations, sample sizes, and magnitudes of mean MLEN.

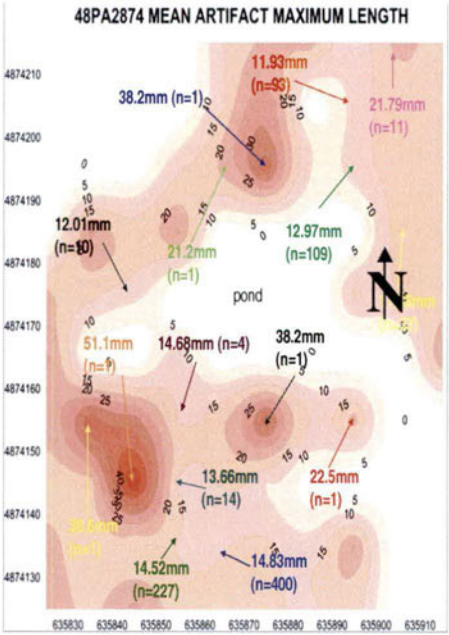

Figure 4. MLEN sizes are in millimeters, sample size is denoted by "n" and the location is denoted by the point on the arrow.

As Figure 4 illustrates, the means appear to be a random scatter with a lack of pronounced size-sorting either larger or small. The smallest mean (11.93 mm) actually occurs farther from the pond than

larger means. The largest mean (51.1 mm) occurs farther from the pond than some of the smaller means. Given this information, size-sorting appears to be lacking. The southern half of the hectare does have what seem to be the possible beginnings of a pattern with most of the large artifacts occurring between northing UTM coordinates of 4874140 and 4874160 (WGS84 datum). If these artifacts are moving downslope into the pond area, this would suggest *colluvial* forces are present. The sample size is not very large, nor is the clustering very pronounced to strongly support this however. Future studies would greatly benefit from the use of a larger minimum sample size for each 10x10 meter unit. A larger region of focus might better depict a pattern as well.

Diagnostic artifacts also lack conspicuous size-sorting as depicted in Figure 5. The Paleoindian point may reflect the

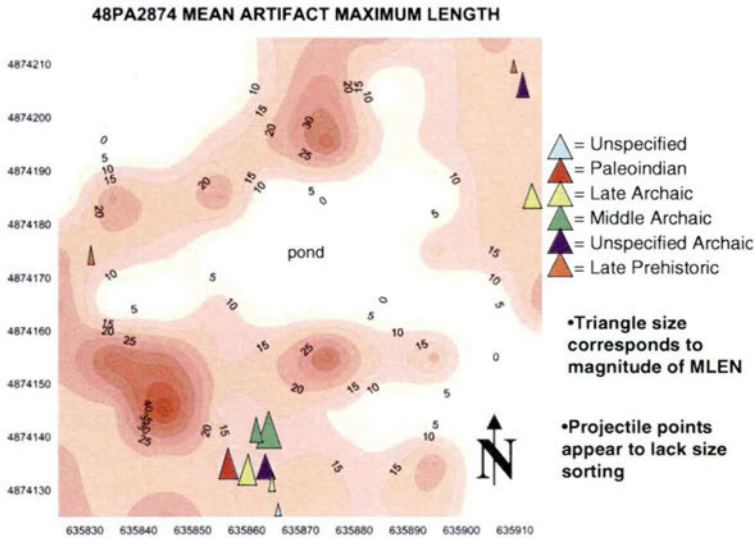

Figure 5. Diagnostic artifacts across the hectare.

weakness or absence of *colluvial* processes on that part of the site as it has failed to move to the lowest point in the pond while being exposed and influenced on the surface for the longest amount of time among the diagnostic artifacts. Perhaps slope gradient is not steep enough to carry it down to the pond bottom. If this is the case, it may reflect cultural deposition if it was not transported from up on a higher slope by *colluvial* processes. Another possibility is that it was *frost heave*d to the surface from horizons beneath the surface. If it reflects cultural deposition, perhaps it was a point that was crafted or deposited right next to the prehistoric pond edge as the pond would have had more water in it during that period.

Another interesting feature of the hectare is that there were no recorded artifacts in the northwestern and southeastern most portions of it (Figure 3). This could be due to a possible change in slope gradient as certain geomorphic processes may not be able to go into affect until a steep enough slope gradient is present (Rick 1976:142). Rick (1976:134) notes that on grassy terrain, downslope movement would be expected to occur at slopes above about 25 degrees. If the gradient is more pronounced in these portions *solifluction* or *overland flow* could cause artifacts to be redeposited in another region and subsequently buried, or simply buried by sediment deposition from above. Figure 6 reveals that there is a change in slope gradient across this portion of the hectare with the southeastern most portions being at the highest point in elevation in the hectare, and the northwestern most portions being at the lowest point in elevation in the hectare.

Another factor that contributes to this hypothesis is that the U27 unit (closer to the pond) was excavated to a significant depth without hitting large stones, while the T26 unit (Figure 1) was excavated only to a shallow depth before hitting the large stones from the Pleistocene slump suggesting deposition of sediments on lower levels has occurred throughout the Holocene. Radiocarbon dates suggest accumulation of at least

a meter of sediment on the slope toward the pond during the last 3700 years. As larger clasts that were found in the T26 unit failed to move downslope into the pond, *colluvial* processes are expected to be a minor factor at this part of the site. One possibility however, is the fact that these clasts belong to the rubble that traveled with the mass wasting slump. Thus, they may have become deposited and subsequently buried. As a result of this process, they may not have been subject to impulses that would overcome their inertia enabling them to travel downslope, hence, the hypothesis that *colluvial* processes are minor (or lacking entirely) on this portion of the site is merely speculative.

Sediment accumulation downslope into the pond region is highly supported by excavation and soil analysis (Gingerich et al. 2006). The accumulation of these smaller grains

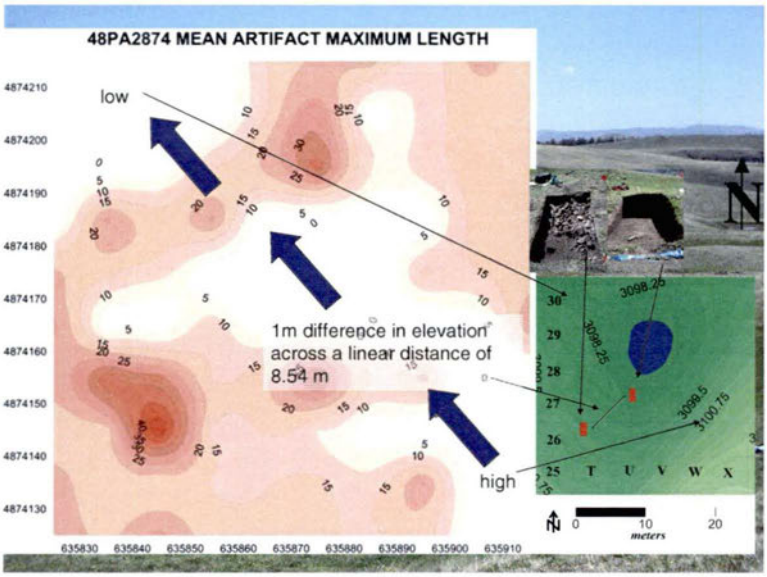

Figure 6. Contour map of hectare positioned next to topographic map both oriented with geographic north pointing to top of page.

downslope coupled with an abrupt drop-off in lithics in the U27 excavation unit suggests that *fluvial* transport may be a major process altering the site's layout. There is a 1 meter difference in elevation between the two units which are separated by 8.54 meters (Figure 6). The gradient between the two excavation units is steep enough to suspect *fluvial* transport is a function of it. If the process involved is *solifluction* this would cause deposition of sediments to lower levels, however lithics would most likely travel in the unsorted mass that slides downslope. The substantial difference in lithics between the two excavation units suggests that *solifluction* is not a major process occurring at this location within the site.

Conclusions and Future Research

The dominant movement process on the site appears to be *fluvial* transport. The slope between the U27 and T26 excavation units is 6.68 degrees exceeding the angle of which artifacts larger than 20 mm remain largely unaffected on less vegetated slopes. As site 48PA2874 is more densely vegetated than the site from which this measurement was found, it follows that, the slope angle at which larger artifacts become affected by *fluvial* force, should increase. Thus at an angle of 6.68 degrees larger artifacts and clasts on site 48PA2874 should remain upslope while smaller artifacts and particles travel down into the sag pond region. As much more sediment was recovered from the U27 excavation unit in comparison to the T26 unit, and there were 304 more artifacts recovered in the T26 unit in comparison to the U27 unit, *fluvial* activity is evident. As the southeastern and northwestern portions of the hectare lack any evidence of cultural remains, sediments could bury artifacts, or *fluvial*, *colluvial*, or *solifluction* activity could cause this. Given the lengthy occupation of this site, the apparent lack of temporally distinct occupation zones, and the

overall size of the site assemblage, it seems unreasonable to presume no cultural deposition occurred in these portions of the hectare. If *solifluction* were the culprit, we would see an unsorted mass of waste on the lowest portions of the hectare (northwest quadrant). This unsorted mass would carry both large and small debris (including artifacts). As no artifacts have been documented in this northwestern portion, *solifluction* can not be the cause. *Solifluction* is most likely non-existent on the site entirely. This is because it requires a lot of moisture and a slope to operate on. The heaviest moisture is on the pond bottom where there is no slope. On the slope, the majority of larger particles (artifacts and clasts) remained upslope, while only the smaller particles traveled to lower levels. This is not a characteristic of a *solifluction* environment.

If *colluvial* activity is operating on the site, larger artifacts would be found on gentler slopes (given there are steep enough slopes for its origin). Across the hectare there is no pattern like this. Other than *fluvial* impulses, the only other probable impulse to induce downslope movement of larger objects would be from animals as people usually do not travel through this region. It is critical to remember that *colluvial* simply refers to impulses under the influence of gravity. On steep enough slopes *fluvial* activity can carry the larger artifacts to gentler slopes as this process would serve as the impulse to *colluvial* movement. In the northwestern portion of the hectare no artifacts large or small are recorded, and there is no trend of small-to-large for artifacts going southeast (highest point) to northwest (lowest point) across the hectare, thus *colluvial* processes can not have caused the vacancy of artifacts observed here unless the larger artifacts were transported to the lower slopes and subsequently buried. A trend of size variation (small-to-large) from the highest elevation to the lowest elevation on the slope would be expected however. The southeastern portion would be littered with small artifacts as they would not be as susceptible to downslope movement

under the influence of gravity. As this portion lacks any artifacts, *colluvial* activity is not responsible for this unless no small artifacts were ever deposited in this portion of the hectare which seems highly unlikely. *Colluvial* activity appears to be lacking on the slope toward the pond as well. The cluster of projectile points (Figure 5) on the slope failed to move to the bottom of the pond, thus we know that *colluvial* activity does not operate here. The projectile points may have been transported from a steeper slope up above and where they stopped happened to be where the critical angle is, however given that all of them are in a unique tight cluster and they vary in size, this is unlikely. The projectile points are oriented in a small-to-large pattern as they get closer to the pond as expected for a *colluvial* environment; however the likelihood that they were all transported from steeper slopes to the same location on the lower slope is small. This is because the magnitude of impulse, lithic weight and density, and steeper slope angle would have to be the same or very similar for the seven projectile points clustered on the slope to end up so close together. The possibility that the projectile points were *frost-heaved* to the surface is unlikely, sediments have never built up here enough to cause burial, but rather they get deposited downslope into the sag pond under the influence of *fluvial* force. The projectile points are of all different ages as well thus they have likely remained on the surface since the time of original deposition. The cluster of projectile points may have been a collector's pile, but they are not close enough together to strongly support this, nor do people pass through the area very often unless they are out there for reasons other than recreation. The only process that may be affecting this cluster of projectile points to a large degree would be *frost creep*. This is because *frost creep* can cause sorted blocky debris to move rapidly. The projectile points are not close enough together to be considered one solid-sorted mass of rubble, and we know they were not heaved to the surface. As *frost creep* is a result

of *frost heave* this is not a plausible explanation for the cluster either. The cluster of projectile points may very well reflect original deposition. This location may have been right next to the prehistoric pond edge, a frequently used water source.

The lack of artifacts in the northwestern and southeastern portions of the hectare is not explained by *solifluction*, *colluvial*, or *frost creep* activities. *Needle Ice* formed from diurnal freezing can loosen soil grains (Matsuoka 1998:122). As these grains get transported they can cause burial, however sediment grains would not be burying artifacts at the highest elevation in the hectare (southeast) in which there are no artifacts. This leaves *fluvial* forces as the only candidate to cause both burial of artifacts in the lowest elevations, and transport from the highest elevations. Data on the angle of this slope are not currently available though it is relatively steep as it connects the highest and lowest portions of the hectare. *Fluvial* activity can also expose artifacts which may explain why there are some small artifacts in the hectare from southeast to northwest.

The hectare in general, lacks any solid evidence of size-sorting either large or small. Other than *fluvial* transport from southeast to northwest and general *overland flow*, geomorphic processes characteristic of size-sorting are largely non-existent. *Overland flow* is also not extreme enough to produce pronounced size-sorting on the surface. *Frost creep* may be operating on the site but only to a very small degree as heaving of the soil is possible. The site has remained largely unaffected by geomorphic processes other than *overland flow*.

As the site lacks a clear picture of temporally distinct occupation zones, specific areas of occupation and activities cannot be deduced within the site itself. The site has retained its integrity throughout the Holocene making cultural deductions of some behavior possible. If we are to infer a random scatter is characteristic of the native populations that occupied the site long ago, then this assemblage may retain

cultural representation. Ethnoarchaeological studies of modern Australian Aboriginal camps and camps made by modern hunter-gatherers in general have noted size-sorting of artifacts as a result of differential disposal (Fanning and Holdaway 2001:682). This may explain the cluster of projectile points on the slope (Figure 5).

Microclimatological data on the site would greatly enhance this research and our understanding of which processes could be affecting site 48PA2874. Vegetation coverage data would greatly support this research as the amount of vegetation can greatly affect the impact of geomorphic processes. Rick (1976:134) mentions that grasses, if present in the past, would have done much to prevent downslope movement of archaeological materials. Bioturbation results would also enhance the understanding of where sediments are being deposited from as badgers and pocket gophers impact the site with their own excavations. Herron (2006) did analysis on the impacts of northern pocket gophers (*Thomomys talpoides)* which once compiled with this research will allow a better understanding of sedimentation and lithic alteration processes. Future excavation analysis will also improve the accuracy of interpretation as has been demonstrated by Svatos and Todd (2006). More excavation may also reveal temporally distinct occupational events. Radiocarbon dates from charcoal are an excellent chronological tool that will enable site formation reconstruction. Martinez and Todd (2006) did some research with auger probes that enabled some recent chronological ordering to the site. More radiocarbon dates would enhance our understandings of site formation in this region. Recording the aspect of artifacts (their geographic orientation) would aid in an understanding of the contribution of *fluvial* processes. Byers (2002:428) has noted skeletal elements lining up either perpendicular or parallel to flow direction. Lichen research can tell us if downslope movement is occurring as lichens will not

survive if the stones on which they live and grow are overturned (Benedict 1970:205).

This research will be greatly enhanced by all of these factors. The site is largely unaffected by geomorphic activity, but further research is necessary in order to establish the degree of alteration that has occurred to the cultural landscape. This research, once conjoined with other biological, cultural, and physical research of the area, will provide us with a better understanding of hunter-gather ecology in high altitudes.

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Infant Initiated Contact in Two Groups of Captive Western Lowland Gorillas (Gorilla gorilla gorilla): Implications for Learning and Socialization

Ashley J. Hamor

Abstract- *This study investigated infant initiated contact in two groups of western lowland gorillas (Gorilla gorilla gorilla) at the Denver Zoo. Both groups were focally observed in weekly three-hour sessions for six weeks. Quantitative data analysis was used to determine the degree to which infants initiate contact within groups. The findings suggest that gorilla infants are highly involved in their own socialization and learning processes.*

It is the behavioral adaptation of observational learning that allows primates to survive and interact within highly complex social structures. Although adult-guided learning is more evident among humans, the role of primate mothers and infants in the transfer of information across generations is unclear; especially for great apes in which infant involvement of information gathering is more prominent than in other non-human primate species (King 1994; Maestripieri et al. 2002). According to deWaal (1990) there is evidence that some primate mothers, while often encouraging their

infants to interact with other group members, may have a variety of motivations for doing so that are not directly linked to the betterment of the infants' socialization. Also, among the great apes passive food sharing, while common between mothers and infants, is rarely observed as mothers actively offering food to their infants or providing assistance in food processing (Maestripieri et al. 2002; McGrew and Feistner 1992). Therefore, the initiative to acquire and process food heavily relies on the ability of the infant. However, it is unclear if this same infant initiative also applies to socialization and learning.

For gorillas, the relationships that an infant forms with its mother and other group members are essential components for appropriate social development (Crosby and Lukas 2004; Enciso et al. 1999; Hoff et al 1981; Maestipieri and Ross 2004; McCann and Rothman 1999; Taylor 1998), but to what degree does an infant gorilla participate in initiating contact with members of its social group? The present study focuses on infant-adult interactions within two groups of captive western lowland gorillas to ascertain the degree (high>75%, medium=50% or low<25%) of infant initiated contact with other group members.

Subjects and Housing

Study subjects are nine western lowland gorillas (*Gorilla gorilla gorilla*) separated into two groups housed at the Denver Zoo in Denver, Colorado. The first group will be referred to as the *L.A. Group* as they are on loan from the Los Angeles Zoo in Los Angeles, California. This group consists of four gorillas: one adult male silverback, two adult females and one infant female. The second group will be referred to as the

Denver Group as they are permanent members of the Denver Zoo. This group consists of five gorillas: one adult male silverback, three adult females and one infant male. Please see the tables below for specific details relating to each group. Please note * indicates the infant's mother.

L.A. Group

NAME	*AGE*	*SEX*
Kelly	19 years	Male
Evelyn	30 years	Female
Rapunzel*	22 years	Female
Tinga	1 ½ years	Female

Denver Group

NAME	*AGE*	*SEX*
Jim	19 years	Male
Angel	19 years	Female
Bassa	29 years	Female
Jo Ray K*	28 years	Female
Jabali	2 ½ years	Male

Each group of gorillas has access to both indoor and outdoor enclosures through a varied schedule determined by the keepers so that neither group comes in physical contact with the other. The indoor enclosure contains climbing structures, hammocks, suspended half-barrels (for hiding food and sitting in), swinging ropes, assorted ground-level barrels and balls, and an abundance of hay suitable for nesting. The outdoor enclosure contains grass substrate (seasonal), trees (some with ropes attached for climbing and swinging), bushes, and rock wall structures.

Procedure

This is a focal animal study and due to the varied schedule of display, one if not both groups were observed for three hours once a week for six weeks starting in September 2006 and ending October 2006 for a total of 18 hours (8.25 hrs/*L.A. Group* and 9.75 hrs/*Denver Group*) of observation. Observations were made between 1100 and 1700 and the order to which the gorillas were observed was randomized. Although observations were collected on all members of each focal group, only data pertaining to infant movements and activities within each group were recorded with time, date, infant initiated contact towards adult, adult initiated contact towards infant, and infant/adult reactions. The following two tables of data (one for the *L.A. Group* and one for the *Denver Group*) are used to quantify the primary initiators of contact and the various reactions to the contact, both positive and negative.

L.A. Group

Reaction	Infant Initiated Contact with Mother	Infant Initiated Contact with Father	Infant Initiated Contact with Non-Parent	Mother Initiated Contact with Infant	Father Initiated Contact with Infant	Non-Parent Initiated Contact with Infant	Total
Positive							
Feeding	9	1	1	1	0	0	12
Grooming	4	0	1	3	0	0	8
Play	9	1	1	0	0	0	11
Moving	8	0	1	0	0	1	10
Total	30	2	4	4	0	1	41
Negative							
Infant Leaves	0	4	2	0	1	0	7
Adult Leaves	1	1	0	0	0	0	2
Total	1	5	2	0	1	0	9
Overall Total							50

Denver Group

Reaction	Infant Initiated Contact with Mother	Infant Initiated Contact with Father	Infant Initiated Contact with Non-Parent	Mother Initiated Contact with Infant	Father Initiated Contact with Infant	Non-Parent Initiated Contact with Infant	Total
Positive							
Feeding	5	0	1	0	0	0	6
Grooming	9	2	6	1	2	0	20
Play	3	10	4	0	6	2	25
Moving	5	0	1	0	0	3	9
Total	22	12	12	1	8	5	60
Negative							
Infant Leaves	1	4	6	0	1	0	12
Adult Leaves	3	3	6	0	0	0	12
Total	4	7	12	0	1	0	24
Overall Total							84

Description of Table Headings

Infant Initiated Contact with Mother: the infant approaches the mother.

Infant Initiated Contact with Father: the infant approaches the father.

Infant Initiated Contact with Non-Parent: the infant approaches a non-parent member.

Positive Reaction: the initiated contact is accepted and results in feeding (breastfeeding or food sharing), grooming, play or adult movement with infant on back or chest.

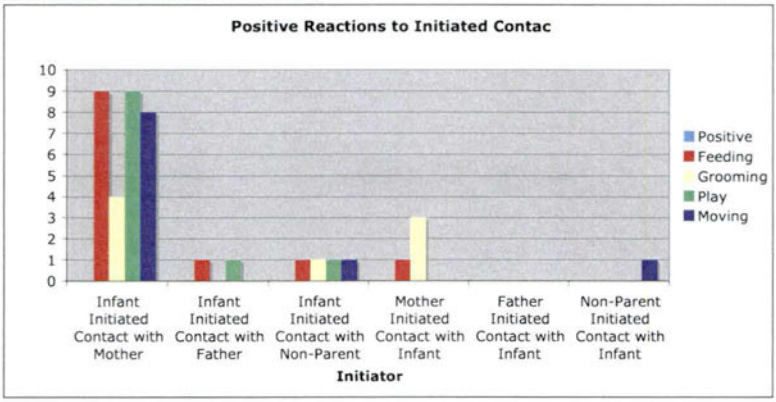
Negative Reaction: the initiated contact is rejected and results in either the infant or the adult moving away from the situation.

Graph Data

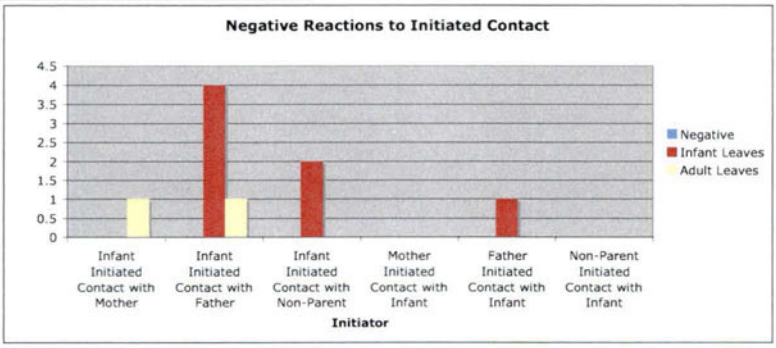
The four graphs below illustrate the frequency of both positive and negative reactions to adult-infant initiated contact for each group. While positive reactions would

most likely lead to more conducive learning environments, negative reactions cannot be ignored due to their various social implications and lessons in spatial proximity (Maestripieri, et al, 2002).

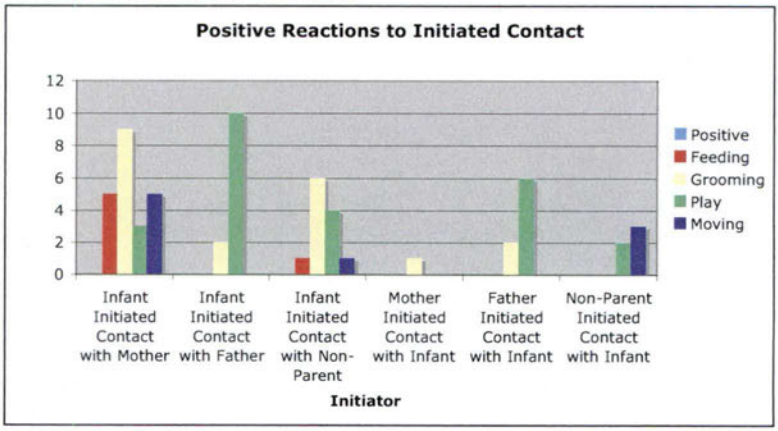
Graph 1A: L.A. Group



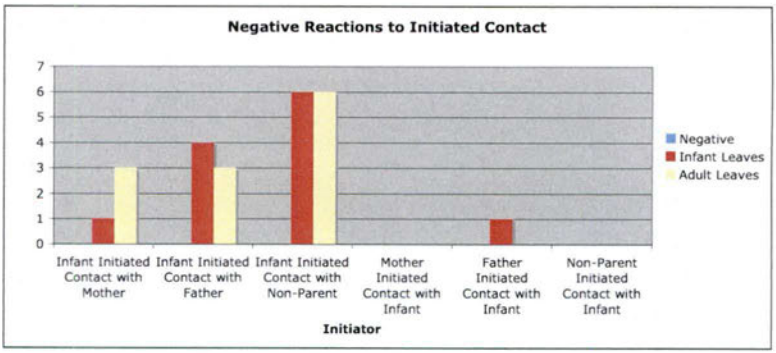
Graph 1B: L.A. Group



Graph 2A: Denver Group



Graph 2B: Denver Group



Discussion

According to the data, Tinga (*L.A. Group*) was responsible for 88% of all infant-adult contact initiated (both positive and negative results) and Jabali (*Denver Group*) was responsible for 82.1%. As can be seen in graph 1A, 1½ year-old Tinga initiated 87.8% of all

positive infant-adult contact with group members. In contrast, her mother was only responsible for initiating 9.75% of all positive contact leaving less than 2% of contact initiation for the rest of her social circle. In graph 1B, Tinga is responsible for initiating 89% of all negative infant-adult contact with group members and her father is responsible for the remaining 11%.

In graph 2A, 2½ year-old Jabali initiated 76.7% of all positive infant-adult contact with group members and his mother only contributed 1.6% of all positive contact, his father was responsible for initiating 13.3% of positive contact and two non-parent females initiated the remaining 8.3%. In graph 2B, Jabali initiated 96% of all negative infant-adult contact with group members and his father that is responsible for the remaining 4%.

It is worth noting that while Tinga initiated 87.8% of all positive infant-adult contact, 83.3% of her contact was directed towards her mother whereas only 47.8% of Jabali's 76.7% initiated contact was directed towards his mother. According to Crosby & Lukas (2004), it is expected that a mother and infant pair spend more time apart from one another beginning at (infant) age 11 months, and steadily decrease their contact throughout the following months resulting significantly in the infant's overall total social behavior over a one year period of time.

Conclusion

Based upon the data gathered, it is concluded the level to which these two infant gorillas (Tinga and Jabali) take are active in their own socialization and learning is in fact high (greater than 75%). It is also concluded that both infants take on the primary role of initiating contact with other group members, which ultimately

results in learning and socialization, and therefore the transfer of information across generations. Unlike other non-human primate species, the ability of great ape infants to create opportunities for their own social learning (Maestripieri et al. 2002) may perhaps be construed as an integral step in the early hominid evolutionary process that lead to the collective effort of learning and socialization seen across human generations today.

Acknowledgements
Many thanks to Dr. Michelle Glantz for her help and support throughout this process! Thanks to Rick Haeffner of the Denver Zoo. Thank you to all my friends and family for their encouragement throughout this experience and special thanks to my father, Gary Hamor, for the use of his *mad* computer skills. This paper is dedicated to the wonderful and fascinating gorillas at the Denver Zoo!

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Understanding Tuberculosis Treatment Adherence: An Ideological and Applied Approach

Bethany Mizushima

Abstract- *Tuberculosis, a highly contagious and life threatening disease, continues to infect people worldwide. In 1995 the World Health Organization adopted and began implementing the directly observed therapy (DOT) program to cure TB infected individuals. The DOT program has experienced relative success; however, there are inherent structural problems that prevent patient adherence. This paper will analyze the ideological approaches to understanding patient adherence in hopes of illuminating both the pitfalls of the program and potential improvements to create increased DOT program success. This paper will also discuss the critical aspects and implications of the DOT program by analyzing its application to the Pine Ridge Indian Reservation, South Dakota.*

Nearly one third of the world's population is infected with tuberculosis (TB). TB is the leading infectious cause of preventable death worldwide (Peabody et al. 2005:347). This disease is highly contagious and life threatening; however, with adequate treatment, it can be cured. Although medicine to cure TB existed for nearly half a century, in the early 1990s the infection rate began to greatly increase. To address this increase, in 1995 the World Health Organization adopted and began implementing the directly observed therapy (DOT)

program to cure TB infected individuals (WHO 2006). Although this program is increasing the cure rate of TB worldwide, there are inherent structural problems that prevent individuals from being able to fully adhere to DOT programs. As a result, the DOT programs are unable to reach all of those in need, thus creating a potentially devastating result, multi-drug resistant TB (MDR-TB). Currently, MDR-TB is expensive and extremely difficult to cure, further stressing the importance of DOT success (Shin et al. 2004:1529). Over the last several years, a community-based approach to the DOT program has been implemented worldwide in hope of increasing the TB cure rate and decreasing the barriers to adherence. This paper will discuss the critical aspects of adherence and the implications of the community-based DOT program by analyzing its application to the Pine Ridge Indian Reservation.

The Pine Ridge Indian Reservation, home to the Oglala Lakota Sioux, is one of the poorest nations in the United States, and like other American Indians, face some of the worst health disparities (Bird 2002:1391; Dixon and Roubideaux 2001:xx; Garwick et al. 2002:209). Although American Indians only comprise one percent of the TB population in the United States, they are "650 times more likely to die from tuberculosis" (U.S. Commission on Civil Rights 2003:35). With this staggering number it becomes apparent that addressing TB in the American Indian population is critical to say the least. I argue that addressing the needs for the Lakota people living on the Pine Ridge Indian Reservation requires understanding adherence to the DOT program through a critical medical anthropology (CMA) approach which focuses on the political and economic forces involved in health. This approach will highlight the structural barriers that inhibit adherence in hopes of developing an appropriate community-based DOT program that could halt this deadly disease on the reservation.

Methods

Methodologically, I used a literature review to provide research on tuberculosis and the directly observed therapy program. Although there was a substantial amount of literature on TB and even on the DOT program, there was a lack of literature on community-based DOT programs. As these programs are relatively recent, it is understandable that there is not a lot of published material focusing on case studies; however, more research is needed. Also, there is an overwhelming lack of current literature for the American Indian population in relation to TB rates, and even more so for the Oglala Lakota living on the Pine Ridge Indian Reservation. To help rectify this gap in research, I will also be drawing upon primary data from the Pine Ridge Indian Reservation conducted by Dr. Kathleen Pickering and her research team. However, this research does not address adherence to the DOT program specifically, which highlights the need for further investigation.

The primary data I will be using is drawn from a longitudinal study of the Pine Ridge Indian Reservation household economics. The study began in the summer of 2001 and ended in the summer of 2006. The study sample of 300 households was randomly selected by using aerial photographs of the reservation provided in 1994 by the USDA-FSA Aerial Photography Field Office's National Agriculture Imagery Program (NAIP). From these photographs, each housing unit was identified and labeled. Furthermore, researcher observations and additional aerial photographs from NAIP (released in 2004) updated the photographs and housing unit identification. From this list of housing units, a set of randomly selected numbers identified participant households. Beginning in 2001, sixty participant households were contacted in person and asked to participate in a qualitative and quantitative household questionnaire. In each following year

of the study, sixty new households were added to the study, and follow-up interviews were conducted with the households previously in the sample. In 2005, the last cohort of household participants was added totaling 300 households.

Although the original purpose of the study was to analyze the interconnections between time allocation, household consumption and social networks to gain a deeper insight into household economic decision making, observations and household suggestions expanded the scope of the research. For example, study participants discussed the double burden of both extreme poverty and poor health and the resulting profound loss to households and the community from premature death and disability. In response, this focus was added to the research (Pickering and Mizushima n.d.:6-8).

Theoretical Approach

This paper is based on the theoretical approach of critical medical anthropology (CMA). This approach builds on the foundations of applied anthropology, Marxism and world systems theory. As such, CMA emphasizes the dialectical relationship between social actors and the larger political and economic systems, power relations, and global ideologies that influence health (Morsy 1990:27). With the emphasis on the global system, the political economy theory contrasts prior anthropological theories in that it no longer sees cultures as separate entities existing in separate time and space. Instead, local and international relationships are analyzed at the social level to reveal the political and economic forces that affect health and illness. Furthermore, this perspective situates all cultures within a historical, political, economic and global context to illustrate the interconnectedness of these forces and health.

A critical medical anthropology approach to TB

Although historically TB was rampant, infecting both the poor and the affluent alike, it is now a disease that is concentrated within populations of low socioeconomic status (Yong Kim et al. 2005:848). For example, in the United States TB disproportionately affects the homeless, imprisoned populations, or minorities such as the American Indian population. Furthermore, TB is a disease that is not constrained by boundaries between nations, geographic locations, ethnicity, gender or age; today tuberculosis infects the poor (Farmer 1997:353). As TB is a global health problem that crosses all boundaries except class, I have not restricted my analysis of the directly observed therapy (DOT) program to one region or culture. Instead, I have analyzed the positive and negative aspects of the DOT program through the lens of CMA, revealing the political, economic and global forces at work. My analysis also acknowledges that differential variations of success can occur, and is attributed to different contexts (cultural, political, economic or historical). Furthermore, this analysis also understands the failures of the DOT program to be the result of shared experiences from a common marginalized position in our global existence (Escott and Walley 2005:1708).

This shared position of poverty is best understood as the result of a non-neutral globalization process (Navarro 2002:114) where resource distribution is patterned unequally (Blim 2005). Therefore, poor families in the United States and globally are suffering as health care systems, with the assistance of the World Bank and the World Health Organization (WHO), are imposing for-profit and insurance-driven medical services (Navarro 2002: 115). As a result of this political and economic relationship, when poor people suffer from TB, discussions about providing the desperately

needed medication become a discussion of cost-effectiveness within the context of a limited good. This perspective stems from inconsistent portrayal of the disease and its costs to the public, a lack of political will, poor financial support, increased complications due to the HIV epidemic and co-infections of TB and HIV, and inaccurate conceptions of cost-effectiveness (Peabody et al. 2005:351; Yong Kim et al. 2005). Often, international health policy-makers discuss cost-effectiveness as if it is a zero-sum game where there is a limited amount of resources available to cure TB and multi-drug resistant TB (MDR-TB). With this perspective, it is more "cost-effective" to treat and cure TB efficiently and effectively to reduce the potential for MDR-TB rather than take resources from TB treatment to cure MDR-TB (Yong Kim et al. 2005:847). At first glance this argument sounds rational and beneficial to the cause of curing TB, but in reality it is not. There should be enough resources available to fund programs that will help prevent new TB infections and cure TB and MDR-TB without cutting funds from one or the other. Therefore, with this zero-sum perspective, "cost-effectiveness" trumps morality and the responsibility to care for the sick and the poor.

Furthermore, what this perspective overlooks is that the return of resources from a healthy workforce could be, for example in the Philippines, five to 18 fold (Peabody et al. 2005:352). Also, with the increase of HIV rates and the potential for HIV and TB co-infections, which are expensive and difficult to treat like MDR-TB, curbing current TB rates would be less expensive in the long run rather than treating HIV and TB co-infections (El-Sony 2006). Therefore, the focus of "cost-effectiveness" should be shifted to encompass a longitudinal perspective that includes morality, rather than fixating on the short-term conception of a limited good.

The DOT Program

Tuberculosis is highly infectious and kills an estimated two million people each year (Peabody et al. 2005:347). Although programs to stop TB do not have endless funding, there has been positive progress in stemming the TB infection and mortality rate over the last ten years within the United States. After TB morbidity and mortality was on the rise in the early 1990s, the World Health Organization adopted the directly observed therapy (DOT) program and began implementing it worldwide (WHO 2006). Even with the positive results of the DOT program, not all of the individuals targeted by the program were able to fully adhere to the entire six to ten-month regimens, threatening a disastrous future involving increased rates of TB and increased rates of MDR-TB.

The DOT program consists of the daily observation of patients taking their chemotherapy medications by health care workers. TB patients must take their medications at the health care facility for the first two months of treatment. For the following four to eight months (depending on how well the patient responds to the treatment), individuals are allowed to self-administer their medications daily with weekly checkups at the health care facility to restock on medications and ask any questions they may have. If this regimen is followed completely, the patient's TB can be cured. However, because of structural barriers, it is not uncommon for a lack of adherence to occur.

In general, some of the major causes for a lack of patient adherence are hidden costs, social forces such as stigma, side effects from the treatment that are unexpected or incongruent with the believed disease etiology, and unhappiness with the health care facilities. These will be addressed at greater length below.

Nonadherence: What are the driving forces?

When reviewing the literature on adherence to DOT programs, three general trends emerged. First is a focus on the culture itself and the cultural aspects or forces that would inhibit individuals from participating in the program. The second approach focuses on the individual and their reasons to not fully complete the program. The last approach to understanding adherence is a political and economic one where the focus emphasizes the underlying larger forces at work that limit individuals from adhering to the program.

An analysis of adherence that only focuses on a cultural approach, an approach that emphasizes the individual characteristics of patients, or the forces behind a political and economic approach, is flawed. Instead, we must broaden our perspective and consider that all of the forces illuminated within these three approaches to adherence are in action and are intertwined within every society. However, it must also be understood that not all of these forces will be equally important in perpetuating or inhibiting adherence to DOT programs. We must therefore address the varying importance of these forces within each community or society to create increased adherence to the DOT program. What must be explicitly stated is that although all of these forces are in action and are intertwined within every society and DOT program, I argue that the forces driving the political and economic approach are almost always the most dominant and important forces to DOT adherence, for what nonadherent patients have in common is poverty and TB (Farmer 1997:351-352). As such, it would be a grave mistake to overlook the political and economic forces while placing sole emphasis on one of the other approaches to adherence.

A cultural approach to adherence

The cultural approach to adherence places the focus of analysis on cultural beliefs about health and illness that are incongruent with a biomedical conception of TB and TB treatment. For example, individuals may experience side effects from the TB treatment and perceive them as a reason to stop the program. Individuals may perceive the side effects of the treatment as being more harmful than the disease itself or as a sign that the medication is not working (Ito 1999:352; Khan et al. 2005:357). Additionally, this approach to adherence may also emphasize individuals' or a cultural groups' preference to use their own "folk" or "traditional" healing techniques to cure TB. This discussion inevitably notes how the healing technique is not as effective, if at all, when compared to the biomedical way of curing TB.

Understanding the reasons why individuals quit treatment or the argument over whether or not a culture's healing traditions are effective or not at curing TB is not most important. Instead, it is necessary and of paramount importance to understand that this cultural approach to adherence highlights a lack of biomedical knowledge and understanding about TB while overlooking the structural forces behind it. It is not to say that the lack of this knowledge, or that incongruent disease conceptions that reduce patient adherence to DOT programs is not important to understand, for these are important findings; however, these findings are just one piece of the puzzle that provides a deeper understanding of adherence. If this cultural approach is emphasized alone, which is common (see Hoa et al. 2005; Barnhoorn and Adriaanse 1992; Gibson et al. 2005), an implication is put forth that more education about the biomedical understanding of TB is the key to increasing the rate of DOT adherence. This however, is not the entire answer to solving adherence barriers.

For example, in Haiti, Farmer (1997:351) has found that patients' etiological beliefs surrounding TB did not predict their DOT adherence like the cultural approach would suggest. Furthermore, Rubel and Garro (1992:629) cite that migrant Mexican farmworkers suffering from TB often attribute the disease to bronchitis or *susto*, a culture bound syndrome, even during continual adherence to the program and increased education from health care staff. Lastly, Jenkins et al. (1996) discuss how Vietnamese immigrants in the San Fransico Bay area have incongruent disease etiologies, but other factors such as marital status and poverty status have stronger prediction abilities for the use of preventative biomedical health services. Therefore, this emphasis is flawed, for solely focusing on increasing biomedical education, knowledge and the cultural approach to adherence does not overcome all of the structural barriers, such as poverty, involved in preventing the completion of the DOT program (Greene 2004:421).

An approach towards individual characteristics

When the approach to understanding DOT adherence is focused on cognitive or phenomenological experiences of the individual patient, larger forces at work can become overlooked and many misconceptions can occur. For example, stigma is often discussed as a factor that decreases participation in TB treatment programs (Escott and Walley 2005:1706; Wandwalo et al. 2006:290). Taken alone this approach can again purport education as an answer to reduce stigma. Although education can help to reduce stigma, it is not the only answer. This interpretation of the problem (stigma) and the solution (education) can glaze over the forces that make TB stigma such an important issue. For example, family members may shun TB patients through actions such as verbal abuse, not allowing the individual to sleep in the same room as the other family members, or to eat with the other family members

(Khan et al. 2005:362). This ostracism can have detrimental effects, and for example, the individual may not be able to get enough sustenance, further reducing the likeliness of a speedy recovery. Ramifications, such as nutritional deficiencies, from poverty and the inability to afford the hidden costs of nutritional foods (Needham et al. 2004:97-98), could remain overshadowed by an emphasis on interpersonal relations without a deeper look into the political and economic forces, such as poverty. Furthermore, stigma could be perceived as being easily rectified with proper education about TB, yet without addressing these larger socioeconomic forces, DOT adherence will not increase.

Additionally, health care workers may perceive TB patients to be non-compliant when in actuality patients are avoiding the health care facility because of issues surrounding the location and facility ambiance. For example, Ito (1999: 344-347) found that in California, Vietnamese refugees were being screened for TB as they entered the country, and if they tested positive, they were provided free TB treatment through the Refugee Preventive Health Services (RPHS). However, health care facility location and ambiance affected DOT completion rates. The facility is located in front of an empty dirt lot that was once a city park, known colloquially as "Needle Park." This name appears to be continually accurate as drug deals frequently occur on the street where the facility is located. Additionally, many homeless people sleep on the sidewalk of the facility as the Orange County Rescue Mission is across the street. Patients reported being stopped on the street and not allowed to continue driving until they paid a fee, being harassed, or they were fearful of being mugged. These negative experiences influenced some of the TB patients to not consistently go to the facility for their daily DOT.

Lastly, individuals may reduce their participation in DOT programs if they experience negative encounters with doctors or health care workers. Ito (1999:353) also discusses

patients' perception of discrimination when they were diagnosed with latent TB. They felt as if the United States were tricking them to believe they had TB, or simply insulting them. These negative encounters with health care staff and the negative experiences surrounding facility location should be perceived at a deeper level then the individual experience. Negative experiences with health care staff should elicit an analysis to understand if institutional racism, or the existence of prejudice and or racist attitudes that are allowed to exist or reinforced by health care policy, is affecting patient and provider relationships. Analysis should also address the political and economic implications of placing a health care facility for refugees infected with TB in an area that may not foster positive experiences.

The political and economic approach, the key to adherence

It is important to understand that the political and economic approach to DOT adherence draws upon the cultural and individual approaches, and does not entirely reject them, in order to bring to light some of the factors inherent in a lack of adherence. Often, the political and economic approach does reject the implications that the other two approaches to adherence focus upon, for they do not stem from the larger forces at work (such as poverty or discrimination). The political and economic approach redirects the focus of the cultural and individualistic approach to highlight the underlying structural barriers instead of the most apparent cultural or individual characteristic. For example, although most of the TB treatment programs are free of charge, there are structural barriers such as hidden costs (the need for gas money or lost wages) that can inhibit individuals from being able to complete treatment.

More specifically, on the Pine Ridge Indian Reservation, where reservation residents are faced with a lack

of consistent wage labor, and incredibly high rates of poverty (Pickering 2000), hidden costs can be a double burden. First, individuals must have the income to provide for these hidden costs, such as money for nutritional foods, gas money to drive to the health care facility or the money to pay for a ride. Second, individuals may loose their wage-labor income if they are employed, as the time commitment for TB DOT programs is usually too great for individuals to keep their employment. This double loss is not specific to the reservation (Greene 2004:418; Needham et al. 2004:97-98), for this situation is created by an impoverished socioeconomic status and through being marginalized within the global economy. A cultural approach or an approach that emphasizes the individual's characteristics is most likely not able to tease out these larger forces at work.

Therefore, the political and economic approach is best able to reveal the underlying forces, such as poverty, marginalization and discrimination. Although the other two approaches bring to light important aspects of DOT adherence, when analyzed alone without the political and economic approach, they are unable to get at, what I argue, is the most dominant and important forces behind nonadherence: structural barriers. This lack of adherence should be perceived not as the pitfalls of culture, or as patient failure, but as a reflection of poor program design and implementation (Farmer et al. 1991: 259). Therefore, it is this approach that is most able to create a more efficient DOT program that addresses these structural barriers and increases adherence.

Community-Based DOT Programs

As not all of the patients who needed TB treatment were completing their DOT programs, the World Health Organization (WHO) put forth the effort to develop more diverse DOT programs that tried to rectify structural barriers

such as poor access to health care facilities, too few health care workers, and inadequate access to medications. Out of this effort the community-based DOT program was developed. Essentially, these programs are the same as the DOT program, except a friend or family member, called a treatment supporter, rather than a health worker, observes the patient take their medicine. This shift in observation reduces the travel time and expenses, reduces the reliance on the health care facility thus reducing opportunities for negative health care experiences and unhappiness with the facility, and builds on already present social support and networks. There are a handful of countries that are currently conducting community-based DOT programs, and as they are developed to be diverse programs for diverse settings, the programs are slightly different, accommodating each community's needs (WHO 2006).

The community-based DOT programs are reporting high success rates. For example, the programs' cure rates are between 80-90% (Khan et al. 2005; WHO 2006). These community-based programs are increasingly being called for as they accommodate the needs of the community so successfully (Advisory Council for the Elimination of Tuberculosis 1995; Escott and Walley 2005; Farmer et al. 1991:258; Shin et al. 2004; Wandwalo et al. 2006). Studies on community-based DOT programs have revealed many more positive aspects to the program than negative aspects.

For example, these programs are able to provide flexible care at a reduced cost while replicating or exceeding the cure rates of health care facility-based DOT programs. Furthermore, treatment supporters or the TB patient check in to a health care facility once a week to restock the medications or to ask any questions that they may have. As the patients or their treatment supporter utilizes the health care facility once a week rather than daily, the decrease in the time demand on the health care workers allows them to focus more time and energy on the patients who come into the facility for their health care

facility-based DOT therapy and for the times when the community-based DOT patients have their weekly visits (Escott and Walley 2005:1704). Additionally, treatment supports were usually family or close friends and were therefore able to build on existing social, mental and emotional support. After becoming treatment supports, they often became a source of financial and nutritional support as well. Treatment supporters also helped to educate other people in the community thus reducing stigma. Lastly, in Tanzania, Wandwalo et al. (2006:288) found that 81% of their sample who were TB patients wanted to become a treatment supporter in the future. They felt that as they had an in-depth understanding of the disease and treatment, they could help other people go through the treatment successfully. Patients also mentioned wanting to reduce the burden of the disease within their community or family.

There are very few negative aspects to community-based DOT programs because they are tailored for each community; however, there are two negative aspects to the program that I will address. First, TB patients who participated in the community-based DOT program had less contact with the health care workers (weekly contact rather than daily). Wandwalo et al. (2005:289) found that patients would prefer to have additional educational materials as they felt they did not get as much time with the health workers or as much information as they would have preferred. Although I did not find this second potentially negative aspect to community-based DOT programs within the literature, I find it difficult to dismiss. Because individuals are able to choose between using a community-based DOT program and a health care facility-based DOT program, I wonder if there is pressure by health care workers or other community members for individuals to utilize the community-based program. This may become problematic if individuals would prefer the facility-based program because of increased privacy or because of a lack of a

social network to rely upon for the community-based DOT program. Nevertheless, the positive aspects of having the community-based DOT program far outweigh the negatives.

An Application to the Pine Ridge Indian Reservation

An overview of health status

Although the health of American Indians has improved since 1955 and infectious disease rates have gone down, in part by the creation of the Indian Health Service (I.H.S.), chronic illnesses, such as diabetes, heart disease, and cancer, have skyrocketed (Bergman et al. 1999:571; Dixon and Roubideaux 2001: xx; Sandefur et al. 1996: 9-10; Zuckerman et al. 2004:53). Currently, American Indians have the lowest health status, the shortest life expectancy, and highest infant mortality rate when compared to every other ethnic group in the United States (Bird 2002:1391; Dixon and Roubideaux 2001:xx; Garwick et al. 2002:209). Life expectancy for American Indians generally is 2.4 years less than any other U.S. race or population (IHS 2006).

Pine Ridge, which is located in the southwest corner of South Dakota, is one of the poorest reservations in the United States, and like the larger American Indian population, they face insurmountable ill health. It is estimated that only 7% of the Pine Ridge residents has health insurance (Pickering and Mizushima n.d.:2), which further increases the reliance on the I.H.S. (who is obligated by law and treaty rights to provide free health care services to all federally recognized tribal members).

Compared to that of the United States population, American Indians have higher disease occurrences and mortality rates. For example, although American Indians only comprise one percent of the TB population in the United States, they are "650 percent more likely to die from tuberculosis" (U.S. Commission on Civil Rights 2003:35). Furthermore, because diabetes is prevalent within American

Indian population as they are "318 percent more likely to die from diabetes," (U.S. Commission on Civil Rights 2003:35) complications with TB treatment can occur (Breault and Hoffman 1997:186-187). For the Lakota living on the reservation, it is estimated that from 1984-1994, they comprise 28% of all active TB cases within the state of South Dakota (Breault and Hoffman 1997:185), and furthermore, in 1991 it was estimated that 5.7% of the population had diabetes (Breault and Hoffman 1997:186). As diabetes and TB are problems on the reservation, especially in relation to the overwhelming rate of mortality for American Indian populations, TB and diabetes prevention and control is needed on the reservation.

Applying a community-based approach

Currently, on the reservation a DOT program is in place where treatment is observed twice weekly, and there is a focus on treating individuals who may have been in close contact with other TB infected individuals (Breault and Hoffman 1997:187). However, as the reservation is the second largest in the United States, there are vast rural areas where getting to the only hospital or one of the three clinics is difficult for emergencies, let alone a twice weekly appointment. Furthermore, this is where hidden costs can escalate the difficulties of following the DOT regimen.

On the reservation, Pickering and Mizushima (n.d.:19) found that nearly a quarter (24%) of her study sample agreed to the statement, "I experience discrimination when I go to I.H.S. facilities," and nearly one third (31%) of the sample agreed that "my access to diagnostic technologies and therapies have been limited because I am Indian." Nearly half (47%) agreed to the statement "racial/ethnic discrimination is a risk factor in disease incidence, treatment, and outcomes for Native Americans," and an overwhelming 64% agreed that

"institutional racism is prevalent in health care delivery systems or policies towards Native Americans." This shows the extreme dissatisfaction with the I.H.S. as well as the perceived discrimination against patients. As these negative health care experiences can inhibit individuals from adhering to TB treatment programs, these data reflect a growing need for a community-based DOT program where individuals would not have to travel as far to get their therapy or increase their opportunity to have a negative health care experience.

Lastly, the reservation is comprised of many villages distributed throughout the entire reservation. These villages were established by family settlements during the creation of the reservation lands. Although family members may live in different villages, most often extended and immediate family members reside in one village. Furthermore, household composition is large and dynamic where often three generations live under one roof. Most importantly, there appears to be a large desire to care for their ill loved ones at home. Participants often discuss the problems with caring for people at their home, but express a deep desire to do so as they know their loved one would be cared for and emotionally, mentally and spiritually supported. Therefore, the geographic location of villages, household composition, and the social system already in place where individuals prefer to care for a loved one who is ill, sets the stage for a community-based DOT program to be successful.

One aspect of the community-based DOT program that will have to be negotiated to best fit the Pine Ridge community is the issue of sweat lodges. As TB is an infectious disease that is spread by coughing, sneezing, speaking or singing, and especially thrives in warm dark places, a sweat lodge would be the perfect place to spread TB. Because many of the Lakota people, regardless of spiritual or religious affiliation, attend the sweat lodge anywhere from daily to once annually, it would be difficult and potentially perceived as religious persecution to

require individuals to not participate in the sweat lodge during TB treatment.

To address this issue, the community-based program could draw upon an example from Ethiopia. In Ethiopia, TB clubs have been created to increase social networks, increase TB prevention activities, increase the identification of individuals who may have TB and encourage them to seek treatment, and to decrease stigma. They appear to be successful. For Pine Ridge residents, TB clubs could be formed to increase social networks so that individuals in treatment can meet other people also in treatment so that they could attend a sweat lodge together. Therefore, reduced contact in the sweat lodge between those who are infected with TB and those who are not could occur, further reducing the opportunity to spread the disease.

Conclusion

For the Pine Ridge Indian community living in the United States, TB reflects the growing economic and health gap between those who have and those who have not. This disease, however, does not have to become a benchmark for these disparities.

In order to halt TB morbidity and mortality, we must continue to develop programs that target the structural barriers that inhibit adherence to treatment programs. We must continue to understand adherence in relation to the political and economic forces in action, and address these forces in relation to other factors (cultural or individual) that may also arise. Therefore, community-based TB treatment programs can be tailored to each community and the programs can directly address their needs.

Ideologically and methodologically, we need a unit of analysis that would measure the dominance of the three approaches to adherence (cultural, individual and political and

economic). This measurement would stand as a model for where program focus and emphasis should lie. For example, if we were to find that a community in fact does have cultural barriers to DOT program adherence that is stronger or more dominant than structural barriers, focus and funding could be directed to address those forces at work. A measurement for dominance would make it easier to discuss and justify the focus of the program being shifted to address the forces at work. Lastly, we must commit to curing TB with moral unwavering determination, and commit to rectifying local, national and global health disparities. With this commitment, TB will no longer disproportionately effect and kill the impoverished worldwide.

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"Fuck Babylon": An Exploratory Study of Caucasians with Dreadlocks

April Biasiolli

Abstract- *Dreadlocks, a hairstyle characterized by matted locks of hair, entered the U.S. approximately fifty years ago. In that time, the style has been adopted by an increasingly diverse group of people, resulting in increasingly diverse reasons for the style and meanings behind it. This study employs a variety of methods and the iterative process of grounded theory to explore the qualitative meaning of dreadlocks on Caucasians, a subject about which little is known. While dreadlocks are simply a style for some, for others they are an act of resistance against what the wearers perceive as the ills of modern society. Due to its small sample size, this study should be regarded as limited in its generalizability; however, it will suggest avenues for future research.*

Background

Dreadlocks, also called "dreads"[1] or "locks," is a hairstyle characterized by matted, generally long, rope-like locks of hair. Hairstyles are an interesting cultural artifact because they are, as Weitz (2001:667) points out, public, personal, and malleable. Dreadlocks are particularly interesting because they

[1] Throughout this paper I have adopted my informants' terms. *Dreadhead* describes a male or female with dreadlocks; *dreadie* can refer either to a dreadlock itself or to the wearer.

are difficult and time-consuming to acquire, difficult to shed (generally requiring head-shaving), difficult to conceal, and often stigmatized. For Caucasians, the initial dreadlocking process can take eight or more hours, and daily maintenance may be required for several months. Furthermore, dreadlocks can be uncomfortable to sleep on and may mold or attract lice (Hurlburt 2006). People with dreadlocks often have dry, itchy scalps (Elena).

Dreadlocks have a long history and span many cultures. In the Bible, Samson is described as having "seven locks of hair" (Judges 16:19). Roman explorers described the ancient Celts as having "hair like snakes." The historian William H. Prescott (1843) described Aztec priests' "long and matted locks." Many holy men in modern India wear dreadlocks.

The hairstyle in its modern form entered the U.S. in the second half of the twentieth century, where it has gone from being the style of a small radical fringe with a definite ideology, to gradual incorporation into various countercultural movements, to acceptance in a wider community. Kuumba and Ajanaku (1998) describe the history of dreadlocks in the Americas in four phases. The first, in the 1950s, is limited to the Rastafarian movement in colonized Jamaica, where dreadheads were inspired by African freedom fighters' matted hair. Some Rastafarians cite Biblical justification for not cutting or combing the hair. For others, dreadlocks represented a rejection of mainstream culture, especially the plantation economy and assimilation into European culture. Dreadlocks entered the U.S. during the second phase, in the 1960s and '70s, to a political backdrop of the civil rights and black power movements and became symbolic of black identity and pride. Reggae artists such as Bob Marley made the style more popular and linked it to a broader counterculture. In the 1980s third phase "Dreadlocks became the practice of a much wider segment of oppositional identities including urban youth culture…rap artists…gay and lesbian activists…radical

intellectuals…and progressive artists and cultural workers" (Kuumba and Ajanaku 1998:233). In other words, dreads spread to a larger number of people, but these people had differing political or social reasons for wearing them. In the final phase, in the 1990s, dreads continued to become more diverse in their wearers and more dilute in their meaning. Music and fashion media commercialized dreadlocks as a fashion and criminalized them through association with gangs and drugs. Many celebrities adopted the style. The historical progression has dreadlocks becoming more common while having a less-defined meaning, leading the authors to conclude that "These trends raise important issues and questions as to the continued symbolism associated with dreadlocks." (Kuumba and Ajanaku 1998:230-233).

Dreadlocks are associated with historically oppressed groups. Dreads retain their strong ties to African identity so, to the degree that racism still exists in this country, they will be stigmatized. African-Americans face discrimination in the workplace and in the legal system. A recent Associated Press release quoted a sheriff, who works in an area temporarily housing people displaced by Hurricane Katrina, as saying, "I don't want to get into calling people names, but if you're going to walk the streets of St. Tammany Parish with dreadlocks…then you can expect to be getting a visit from a sheriff's deputy" (AP 2006). Rastafari has traditionally regarded women as base, inferior creatures in need of a man's firm guiding hand (Chevannes 1994:29-30). By adopting a traditionally black hairstyle, whites, and white women in particular, may find themselves victims of discrimination by proxy.

Though dreads have increased in popularity, dreadheads of both sexes often face employment discrimination. A Georgia State University student was required to cut his dreadlocks to receive a prestigious internship (Saunders 2006). Six Flags employees, including

ones who work in costumes that do not show their hair, are not permitted to wear dreadlocks, which the park's employee manual calls an "extreme hairstyle" (Thomas-Lester 2006). One woman comments,

> I see people treated differently depending on their hairstyle. Especially women who wear dreads; I see they have to fight for respect, demand it. It's almost a constant struggle. As opposed to women who wear their hair straight [and] are perceived to be more intelligent and professional (Weitz 2001:681).

She is correct; women with conventionally attractive hairstyles are more likely to be hired for a job, to be promoted, and to receive higher salaries (Weitz 2001:673). "Ethnic" styles have usually been considered unattractive, both for men and women (Weitz 2001:672-679; Erasmus 2000). When combined with sexism in the workplace, dreadlocks make economic self-sufficiency even more difficult for women to achieve. Among former dreadheads, the need to find a job was cited more often than any other reason for changing their hairstyle (Kuumba and Ajanaku 1998:239).

While the subject of blacks' wearing of dreadlocks has received little academic attention, whites' has received virtually none. Many of Kuumba and Ajanaku's (1998:230) respondents cited African identity, post-colonial solidarity, and the 'natural' character of dreadlocks as reasons for wearing them. Obviously, none of these apply to Caucasians adopting the style. It seems reasonable to assert that wearing dreadlocks has a particular meaning for whites, but that it is qualitatively different than the meaning given to them by blacks.

Given the difficulty many Caucasians have in acquiring dreadlocks, their association with oppressed groups, the possibility of employment discrimination, added to the fact that dreadlocks do not have the same historical or identity implications for Caucasians as they do for people of African descent, the choice to wear dreadlocks seems inexplicable.

Though the particular meaning has become more diffuse and dilute, dreads continue to be associated with political activism (Sims 2003). If dreadlocked Caucasians have a political message, their hair may be a powerful way of expressing it; however, apolitical dreadheads may face negative repercussions for the political implications of their style. Weitz's (2001) discussion of hairstyles as both resistance and accommodation sheds some light on this.

Methods and Respondents

For this study, I used an iterative process, using both the literature and previous informants' views to shape later tools. An initial interview, combined with methods from the literature, guided the creation of a survey; the survey results, in turn, led me to additional interviews. The wearing of dreadlocks by Caucasians can be examined through the lenses of resistance and collective identity. Kuumba and Ajanaku (1998:227-43) used these concepts in studying African-American dreadheads, and I decided to stand on their shoulders in using them to examine Caucasians' dreadlocks.

The concept of resistance has been used differently by many authors; Hollander and Einwohner (2004) sifted through the various definitions to identify four key components of resistance: action, opposition, intent, and recognition. Some or all of these components may be present in a resistant action. Dreadheads clearly meet the criteria for action: they have adopted a hairstyle that is time-consuming to achieve and maintain, virtually impossible to conceal, and difficult to change. The economic, legal, and political implications cited above indicate recognition. However, more research is needed to determine whether dreadlocked Caucasians oppose something and whether they intend their hair to make that oppositional statement. Weitz emphasizes: "we need to more narrowly define resistance as actions that not only reject

subordination but do so by *challenging the ideologies that support that subordination* [emphasis in original] (2001:670).

Ashmore, Deaux, and McLaughlin-Volpe (2004) identified the elements of collective identity: self-categorization, evaluation, importance, attachments and sense of interdependence, social embeddedness, behavioral involvement, and content and meaning. Self-categorization is the extent to which a person considers himself a part of a group and perceives himself as fitting in. Evaluation refers to the member's judgment of the group and his perception of others' judgments of it. Importance, which may be explicit or implicit, is the degree to which group membership is important to the person's sense of self. Attachment and interdependence refer to the strength of a member's relationships with others in the group. Social imbeddedness, the degree to which collective identity dictates everyday actions, is similar to behavioral involvement, the amount of time dedicated to actions implicated with the identity. Content and meaning encompass the extent to which a person's self-description is similar to the group's description, the beliefs of the group, and the connection between the group's narrative and the individual's narrative.

I designed my initial interview guide to look for aspects of resistance and collective identity. I interviewed Kirsten, who is twenty-nine and has a Bachelor's degree in Spanish with a double minor in anthropology and Latin American studies. She worked until recently as the outreach director for a Christian non-profit that provides services to at-risk youth. She was laid off due to funding issues. Kirsten had had dreadlocks for five years at the time of the interview.

I designed the survey to look at resistance and collective identity and some of the "rich points" (Agar 1996:31) from Kirsten's interview. Eight women and seven men with dreadlocks were surveyed. Fourteen of these self-identified as white and one as Native American. I spent

approximately eight hours in various locations, including the Colorado State University student center and library and a nearby coffee shop, approaching anyone who walked by who had dreadlocks. Everyone approached in this manner agreed to fill out a survey. Other respondents were recruited by previous ones. The respondents had been wearing dreadlocks for an average of six and a half years. Three had had them for nine years; one had only had them for a month (and only about half of her hair was dreadlocked). Since all of the surveys were collected on or near campus, twelve of fifteen respondents were students. Only 27% of Americans attend a university (Organization for Economic Cooperation and Development 1998). The average age of the respondents was 23.1, whereas only 7% of the US population is aged 20-24 (US Census Bureau 2005). There is no statistical data available for dreadlock wearers, so it is impossible to know if this group constituted a representative sample of dreadheads, but it is not representative of the US in general.

Last, I interviewed two more people, one man and one women, using decision analysis techniques (Bernard 2006:522-27). Elena is a nineteen-year-old college student who has had her dreadlocks for two and a half years. Rick is a thirty-one-year-old single father of two pursuing a second bachelor's degree; he has had dreadlocks for nearly nine years.

Results and Analysis

Dreadlocks as Resistance

Adopting a particular hairstyle may convey resistance (Weitz 2001:667). Kuumba and Ajanaku (1998:227-243) identified dreadlocks on people of African descent as an act of resistance. Caucasian dreadheads may also be involved in resistance. To explore this concept, I used four elements: action, opposition, intent, and recognition, which are borrowed from Hollander & Einwohner's (2004:533-554) discussion. According to these

authors, the combination of one or more of these elements constitutes different types of resistance.

Wearing dreadlocks constitutes an action. Twelve of seventeen respondents agreed that it was hard to get their hair to dreadlock at first, so it clearly required effort. Although convenience was commonly cited as a reason to have dreadlocks, they spent an average of 2.3 hours per week caring for their dreadlocks, with one reporting eight hours a week. Others, however, said that their hair dreadlocked naturally, and many said that they spent little time on maintenance.

The dreadlock wearers I interviewed or surveyed see themselves in opposition to mainstream American culture. They used phrases like "counter-culture" and "anti-establishment" to describe dreadheads. In describing what their dreadlocks said about who they are, my respondents said "I am an individual," "I do not conform to…American society," "I'm not part of the dominant culture," "I am not afraid to challenge stereotypes or the status quo," "It's a good thing to stand out in a crowd," and "I'm an anticonformist [*sic*] individual." Interestingly, some also seemed to want to stand out from what they perceived as dreadlock culture: "I'm not doing it to fit into some counter-culture." One said "they express my own personal beliefs and nothing else" and went on to list his beliefs that (he implied) clashed with counter-cultural ideals. Although respondents varied in what they wanted their dreadlocks to say about them, there was a palpable sense of opposition.

Although the majority of my respondents agreed that their dreadlocks sent a message, the intent of this message was ambiguous. There was mixed agreement with the statements "my dreadlocks express my political beliefs" and "my dreadlocks express my religious or spiritual beliefs," and only moderate agreement that they reflect musical tastes. Likewise, the respondents seemed indifferent to whether others understood their message. The majority disagreed with the

statement "it's important to me that people understand the message that my dreadlocks send." There were mixed responses (leaning toward disagreement) to the statement "my dreadlocks help other people understand who I am." There is a strange disconnect here: while dreadies believe that their hair sends a message, they are oddly indifferent to whether others perceive this message. My preliminary interview piqued my interest in this ambiguity, and the survey data indicates that it may be widespread among dreadheads. If a larger survey sample upheld this trend, careful probing would be necessary to determine whether this is true indifference or another aspect of rejecting mainstream culture.

It is hard to assess whether others recognize dreadies' message. Given the ambiguity of this message, perhaps this is not surprising. When asked how others perceived their dreadlocks, my respondents tended to pick the "not sure / neutral" option. This may indicate that they do not know others' opinions or that they do not care. Kirsten asserted quite strongly that she is indifferent to others' opinions about her hair; she avoids discussing it. There was some agreement that others perceive dreadlocks as sending a political or religious message. Other comments indicated that non-dreadies believe dreadheads are dirty, lazy, or drug users. One survey-taker took time to tell me about strangers approaching him to try to buy marijuana. A few said that their hair was just hair and didn't say anything.

Respondents identified a variety of mainstream cultural aspects that they rejected by having dreadlocks. Given this variety, it is understandable that observers may misunderstand the message of dreadlocks. Wearing dreadlocks may be missed resistance, since observers may not perceive the message wearers intend. Likewise, it may be target-defined resistance if observers perceive a message different than the one intended. It would be fruitful to survey non-dreadheads to gauge their perceptions of dreadlocks to better understand the recognition

aspect of resistance. Overall, it is fair to say that dreadlocks constitute resistance, since wearers oppose mainstream culture and attempt to convey this via their hairstyle.

Dreadlocks as Collective Identity

Dreadheads' self-identification with dreadlock culture was ambiguous. While most agreed (and only one disagreed) that they had things in common with people with dreadlocks, most also disagreed (and none agreed) that their dreadlocks showed that they belonged to a group. Two respondents refused to list phrases that described dreadheads, because they felt it was unfair to categorize people based on their hairstyle. When asked if they liked to spend time with dreadies, most people picked "not sure / neutral" and several wrote in that they don't pick their friends for their hairstyles. Most respondents didn't spend significant amounts of time with other dreadheads; the other dreadies that they knew usually weren't people with whom they had significant relationships.

Although they don't self-identify strongly with dreadlock culture, when asked to identify traits that describe dreadheads, these traits lists showed some overlap with respondents' description of what their dreadlocks say about them. Individuality was one of the most commonly mentioned characteristics of dreadies, which may explain their hesitance to identify themselves as a group. Nevertheless, they did seem to share broad characteristics in general. The strongest of these was a sense of being on the cultural fringe, rather than in its center. Since a limited number of people exist in the center, those outside the center comprise a large group. Dreadheads place themselves in this large group but not in any more specific group.

My respondents generally saw dreadheads in a positive light. Words and phrases that they used to describe them included: easy-going, open-minded, individualists, idealists,

non-materialistic, self-confident, laid-back, free-spirited, steadfast, patient, and unique. However, some used negative terms to describe people with dreadlocks, such as dirty, druggy, and unkempt. Kirsten used quite negative language to describe dreadheads. More positive terms than negative were used; in particular, concepts like 'laid-back' and 'free-spirited' came up more than once. Accusations of drug use and dirtiness seem to be the most common derogatory comments. It is true that dreadlocks can become moldy or lice-infested if not cared for properly (Hurlburt 2006), but they are not necessarily dirty. There are no statistics on whether dreadheads are more likely to use drugs than average. This perception probably stems from dreadlocks' traditional connection to Rastafari (which uses marijuana ritually) (Chevannes 1994) and sense of being on the cultural fringe.

Dreadheads' understanding of others' evaluation of them was mixed. More reported positive comments about their dreadlocks than reported negative comments. However, all agreed that there are stereotypes about people with dreads. The respondents seemed unsure about others' perception of dreadheads. When asked who perceived dreadlocks negatively, they tended to list people who could be considered the cultural "center," that is, the culture definers. They mentioned conservatives, older people, upper- and middle-class people, "sorority types," and law enforcement. Eight said that dreadlocks make it harder to get a job, while only one said they did not (the rest were not sure or neutral). In identifying those who perceive dreadlocks positively, they listed those on the cultural fringe. Overall, they said that familiarity and understanding breed tolerance.

It is difficult to evaluate the importance of having dreadlocks to my respondents' self-image. While many said that their hair expressed important things about them, others said that it was just hair. Aesthetic reasons were the most commonly cited reason for having dreadlocks. Given the level

of effort that goes into acquiring and maintaining dreadlocks, and the fact that many have had them for years despite the believing that they are stigmatized, it seems safe to say that the importance of having dreadlocks outweighs the benefits of not having them in the perspective of the wearers.

Dreadlocks are not strongly socially embedded in wearers' lives. Social embeddedness has two factors: the extent to which a person's social relationships and everyday actions are dictated by their collective identity (Ashmore et al 2004:83). In identifying other dreadheads that they saw regularly (once a week or more), my respondents tended to list people tangential to their lives. Some had friends with dreads, but classmates were mentioned most often. One implied that his family had dreads, but he did not see them often. Another's three-year-old daughter had dreadlocks. Six did not answer this question, which may indicate that no one that they see regularly has dreadlocks. Having dreadlocks did not seem to take significantly more care than ordinary hair. While the average was 2.3 hours, this was pulled up by one person who said that he spent eight hours a week on hair; several reported spending very little time, and convenience was the second most commonly cited reason for having dreadlocks.

Ideology as an aspect of collective identity refers to a person's "beliefs about a group's experience, history, and position in society" (Ashmore et al. 2004:83). Kirsten was quite knowledgeable about the history of dreadlocks in the US. I did not ask survey respondents about this topic, since it is more suited to interviewing. I touched on their experience in asking about stereotypes and reactions to dreadlocks. As discussed above, there were mixed responses.

Dreadheads' perception of their place in society has been an interesting and elusive idea. The concept of Babylon, which came up in interview, seems essential to understanding this. In the Bible, Babylon was a city that fell from greatness due to sin. In the Book of Revelations, it is used as a symbol

for all wicked cities. This concept is carried further in Rastafari (Chevannes 1994) in which Babylon stands for the corruption of the modern world. Kirsten described Babylon as a symbol of greed, materialism, and self-serving. This concept comes up often in dreadlock culture. During one interview, a listener at another table interjected with "fuck Babylon!" apropos of nothing. Babylon is mentioned and alluded to in a recent documentary about dreadheads (Hurlburt 2006). Several survey respondents touched on this idea, particularly the one who wrote, "I do not conform to the corporate-driven, money-based, plastic, greed-driven, peer-pressured, influence of media, and the overall closed-minded American society" [emphasis in original].

If Babylon symbolizes all that is wrong with US culture – greed, materialism, environmental degradation, self-serving, focus on appearances – dreadheads are the rejection of Babylon. Several mentioned their concern for the environment. Many mentioned individuality and rejection of appearance norms. One said, "Vanity is no first priority." Another said her dreadlocks show that "beauty comes in many forms." Though they have chosen a stigmatized hairstyle, they want not to be judged by it. One said, "I am not afraid to challenge stereotypes or the status quo with regard to social behavior, gender roles, or intellectual acumen." Two made a point of saying that they did not fit the stereotypes of dreadheads. One gleefully told me that no one expected him (based on his appearance) to "ace" a calculus course. Kirsten made a point of trying to prove that dreadlocks don't bar professional employment. In other words, dreadheads' place in society is on the fringe, but they are responding to the core.

It is hard to say whether dreadheads have a collective identity. They do not identify as a group, do not seek each other out, do not spend a good deal of time on dreadlock cultural activities, and have only a broad shared ideology. If anything, they value individuality and rejection of the

mainstream – but the main stream is a broad one and they are a variety of counter-currents.

Dreadlock Decision Analysis

Given the immediate and long-term costs of dreadlocks and the delayed benefits, one must ask, why? Why go to this much trouble to acquire a stigmatized and often uncomfortable hairstyle? My survey informants cited aesthetics and convenience as the main reasons for having dreadlocks. Elena and Rick, whom I interviewed about their decision to wear dreadlocks, also discussed these reasons, but other factors went into the decision as well, such as exposure, support of friends, perceived identity, and the absence of economic sanctions for doing so.

Both informants chose dreadlocks at a time when they were making changes in their lives and establishing their identities. Their dreadlocks are part of their history. Elena thinks of the people who helped dread her hair. She even keeps mementos in her hair: one is a glass bead made by a glass-blower friend; another is a ring that she outgrew. Rick, too, has beads in his hair; this seems to be common. His dreadlocks remind him of a different time in his life, before he became a professional and a father. Each discovered reasons to maintain their dreadlocks that they didn't consider originally. Elena finds that they make her distinctive: people remember her, and her dreadlocks sometimes become a conversation piece. Rick found that his dreadlocks help him to meet women.

These two informants offer different perspectives because they have had dreadlocks for different lengths of time. Elena has had hers for two and a half years, so her memory is fresher but she is less reflective about it. Rick has had his for nearly nine years and has some perspective on how his former

self made a decision that (I think) his current self wouldn't. This contrast provided an invaluable difference in perspective.

Both my interview and survey informants cite convenience as a reason for having dreadlocks more often than any other. (Aesthetics – "I just like them" – is the next most common reason.) My impression is that this is an easy answer, one that is readily accepted, and that the true reasons are more complicated. Dreadlocks often have more to do with *perceived* or *desired* identity more than actual identity. Several people have said that they started wearing dreadlocks to change either how other people saw them, or how they saw themselves. My informants have consistently told me that they don't wear dreadlocks in order to fit in to a certain group. Indeed, I think they do it to establish who they *aren't* more than to establish who they are. "I'm definitely not a straight-edge, clean-cut person, that's for sure," Elena said. Dreadies seem to see the mainstream as a small, exclusive group and themselves as part of the majority outside of it. The concept of Babylon, though not always so named, is recurrent. Dreadheads sense moral flaws in American culture and wish to distance themselves from it.

Conclusions

Although my study was limited and exploratory in its nature, it provides a glimpse into a rarely studied subculture. It seems clear that, though it may be qualitatively different than African-Americans', Caucasians' dreadlocks are generally have significance beyond style. Many respondents saw their hair as having a great deal of meaning, but most were indifferent to whether others understood this meaning. Other respondents said that their hair had no meaning; it was just a style. I think that dreadheads can be divided into two groups, which I will call *musical dreadies* and *ideological dreadies*. The former have dreadlocks as a style, often to express their musical taste.

The latter see their dreadlocks as an act of resistance. The meanings of ideological dreadies are quite diverse. They may be about beauty norms, "the status quo," environmental concerns, materialism, media influence, or being 'natural.' Interestingly, one of the things they are resisting is the idea that people can be judged on their appearance; two refused to list words that described people with dreadlocks because they didn't think it was fair to categorize people by their hairstyle. The fact that they took the time to write in these comments, rather than just leaving the section blank, seems to indicate that this is a strongly-held opinion.

Many of the issues mentioned in the interviews and surveys can, I believe, be summed up in the concept of Babylon. In the Bible, Babylon becomes a symbol for cities that fall from greatness due to sin (Revelations 17:5); in Rastafari, Babylon refers to systems of exploitation, such as the colonial powers that oppressed African and Jamaican peoples (Chevannes 1994:87). In dreadhead culture, it is used as a shorthand for the moral ills of modern society (Hurlburt 2006), and especially US culture (Kirsten). These problems include materialism, greed, environmental degradation, and prejudice. The idea of resisting Babylon explains the fact that my respondents did not see themselves as a group. They are, however, united in feeling outside the cultural mainstream. This fringe group is standing in opposition to the culture-makers at the core of our society, i.e. Babylon. For this reason, the phrase "Fuck Babylon!" may describe dreadlock culture as succinctly and accurately as anything.

Several directions seem promising for future research. Larger-scale studies of resistance and collective identity would provide additional insights. Interviews or surveys of non-dreadheads would cast light on the recognition and perception aspects of these two concepts. Testing of my ethnographic decision model would reject or confirm its usefulness in predicting who will adopt dreadlocks. Thought this subculture

is quite small, it is growing and diversifying and may prove to be an interesting realm for future study.

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Appendix I: Survey

How long have you had dreadlocks? _____ years _____ months _____ days

What made you decide to start wearing dreadlocks?

For each of these statements, check a box to indicate if you agree, disagree, or have no opinion.	Strongly Agree	Agree	Not sure / Neutral	Disagree	Strongly Disagree
At first, it was hard to get my hair to dreadlock.					
My dreadlocks are easy to care for.					

How much time do you spend caring for your dreadlocks in an average day or week?

For each of these statements, check a box to indicate if you agree,	Strongly Agree	Agree	Not sure / Neutral	Disagree	Strongly Disagree

disagree, or have no opinion.					
People often say negative things about my dreadlocks.					
People often say positive things about my dreadlocks.					
There are stereotypes about people with dreadlocks.					
Other people think my dreads express political beliefs.					
Other people think my dreads express religious or spiritual beliefs.					
Overall,					

other people think negative things about people with dreadlocks.					
Overall, other people think positive things about people with dreadlocks.					
Most people don't understand what my dreadlocks say about me as a person.					

What kind(s) of people thing negative things about dreadlocks?
What kind(s) of people say positive things?

For each of these statements, check a box to indicate if you agree, disagree, or have no opinion.	Strongly Agree	Agree	Not sure / Neutral	Disagree	Strongly Disagree

Having dreadlocks makes it harder to get a job.					
I have things in common with people who have dreadlocks.					
I like to spend time with people with dreadlocks.					
My dreadlocks show that I belong to a group.					

What words or phrases would you use to describe people with dreadlocks? (Please list at least five.)

Think of all the people that you spend time with in a normal week. Then think of which ones have dreadlocks.

List those people and their relationship to you. (For example, a person might be a friend, brother, sister, classmate, coworker, acquaintance, etc.)

For each of these statements, check a box to indicate	Strongly Agree	Agree	Not sure / Neutral	Disagree	Strongly Disagree

if you agree, disagree, or have no opinion.					
My dreadlocks express my political beliefs.					
My dreadlocks express my religious or spiritual beliefs.					
My dreadlocks express my taste in music.					
My dreadlocks help other people understand who I am.					
My dreadlocks make me unique.					
My dreadlocks say					

something about who I am.					
My dreadlocks send a message.					

Do you consider yourself:

A. Liberal
B. Moderate
C. Conservative
D. Other _____

What do your dreadlocks say about who you are?

Do you consider yourself:

A. Democrat
B. Republican
C. Other _____

What kind(s) of music do you listen to?

For each of these statements, check a box to indicate if you agree, disagree, or have no opinion.	Strongly Agree	Agree	Not sure / Neutral	Disagree	Strongly Disagree
It's important to me that people understand					

the message that my dreadlocks send.					
Having dreadlocks is a fashion.					
Having dreadlocks is a lifestyle.					

What is your age? _____

What race / ethnicity do your consider yourself?_____

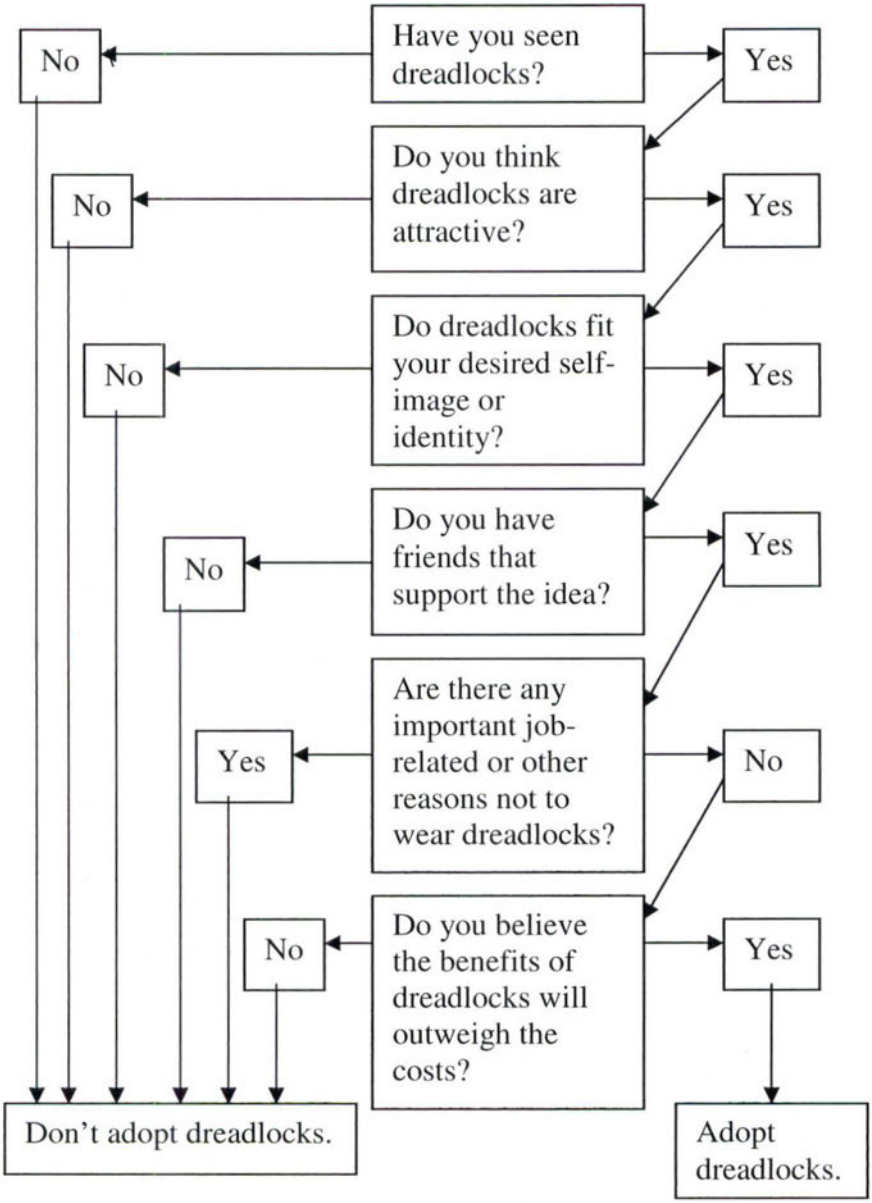
What is your job / occupation? _____

What is your sex? _____

If you have a religion, what is it? _____

Appendix II: Ethnographic Decision Model

How did you decide to wear dreadlocks?



Mormon Economics: Differential Capital Access by Gender and Religiosity

Henri Jean-François Dengah II

Abstract-*The Church of Jesus Christ of Latter-day Saints (LDS) is characterized by its communal nature. As such, the Mormon religion operates as an economic club, where the Church and its members exchange various goods, services, and labor. The members place great reliance on each other, as well as the Church, to provide salvation, psychological support, economic aid, and material needs. This paper will argue that the LDS Church offers its members differential access to capital along lines of gender and religiosity. Thus, various monitoring and surveillance techniques are utilized to determine the distribution of official Church capital, as well as informal community capital. Adherence to ascribed gender roles and doctrine is rewarded through capital acquisition opportunities, while social/religious deviance is punished through capital loss and accumulation limitations.*

On any given Sunday, Saints from around the world amass at neighborhood Church buildings to worship in communal solidarity. Though the locations may vary, and the languages at these services may be disparate from one another, the messages remain the same. Indeed, despite a global membership of over 12.5 million people, the Church of Jesus Christ of Latter-day Saints (whose followers are often referred to as LDS, Saints, or Mormons) ensures that Sacrament Meeting topics are synonymous, whether delivered in London, Manila, or Fort Collins, Colorado (176th General Conference

2006).[i] Through these and other mechanisms, the Mormons have created a vast "imagined community" of the faithful (Anderson 1991).[ii] In as much, the LDS Church is one of the fastest growing religions in the world. It is no wonder, therefore, that at least two non-Mormon scholars (Shipps 1985, Stark 1984) became independently convinced that the spread of Mormonism represents the rise of the first new world religion since Islam (Mauss 1984:452). While the connections of individuals between the Spring Creek Ward in Fort Collins, Colorado (the focus of much of the research presented in this paper) and the Hyde Park Ward in London, England may be superficial and imaginary at best, the social networking and religious experiences at the local level reify the bonds between members at a global level. As the Fort Collins Stake President reiterated at a recent baptism for two new converts, "You now have friends and family [the Church members are often referred to with familial metaphors] wherever you go."

Although perceived global connections are integral to the Church, this paper discusses the equally important local, experiential connections. Involvement in the Church is certainly not casual. One's obligation to the Church and the other members go far beyond Sunday worship. One of the defining features of membership in the Church of Jesus Christ of Latter-day Saints is its communal nature. The Saints perceive each other as part of the same Eternal Family, which expects its Brothers and Sisters to watch and take care of each other.[iii] Indeed, the prevalent discourse pertaining to the Church as a family emphasizes the role all members have to help each other out "in service, things earthly, and things spiritually" (informant, McClure 2006). Accordingly, Mormon communal-sufficiency is highly valued.

The social networks provided by the Church allow members access to goods, services, opportunities, and possibilities that are difficult to obtain on an individual level. This access requires substantial input, effort, and adherence to

social norms by individual members, and effectively results in a high degree of social embeddedness. In order for a member to be in "good standing," that is, to be eligible for the highest output of religious and social capital benefits, one has to "donate" or "input" a substantial amount of personal income, as well as time and labor to the institution and its members. Thus, in accordance with Michael McBride's (2006:1) analysis, "the Mormon Church is best understood as a club, in the economic sense of the term. [The Church] offers a menu of club goods of varying excludability, with the most valued goods excluded from less-committed members."

This paper argues that the Church of Jesus Christ of Latter-day Saints offers its members differential access to goods, services, and capital along a multiplex of criteria. Notable criteria discussed here include perceived religiosity (or measures of commitment to the Church and doctrinal adherence) and gender. As such, various monitoring and surveillance techniques are utilized to determine the distribution of official Church goods and services, as well as informal community goods and services. This paper further explores the nature of the costs and benefits Mormons often experience, and the motivations for membership in the Church of Jesus Christ of Latter-day Saints.

This paper is divided into four parts. The first part briefly describes the LDS Church and its members. The second part explores Pierre Bourdieu's concept of social capital and Todd Sandler's club theory in order to provide theoretical loci of analysis. The third part discusses differentiated membership in the Church, and some of the monitoring mechanisms employed to identify and enforce these disparities. The final part analyzes social networking and differential capital acquisition in recent fieldwork with the LDS community in Colorado.

Background of the LDS Church and its Members

An examination of the Latter-day Saints reveals that members are inseparable from their religious charter and doctrine. As such, the following section provides a backdrop of the characteristics and beliefs of the Mormon religion and community. According to shared Mormon history, LDS followers comprise a very communal society.[iv] Though completely integrated into American society today, the LDS community markedly emphasizes the family and altruistic reciprocity. Accordingly, Mormon identity is derived from their shared history, beliefs, and reliance on one another.

Joseph Smith, Jr. founded the Church of Jesus Christ of Latter-day Saints in 1830. The process by which Smith founded the Church provides a divine and authoritative charter of Mormon gospel and beliefs. In effect, Smith's narrative represents one of the cornerstones of the Mormon faith (Hinckley 1989:8). As one would expect, the members, with startling homogeneity, readily retell this story. Numerous LDS members contributed to the condensed version of Smith's experience provided below.

Mormon Founding Narrative

According to Church doctrine, in the Spring of 1820, after unsatisfactory study of several Christian religions at the age of fourteen, Joseph Smith, Jr., recalled the biblical verse James 1:5, "If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him." Smith then retreated to a wooded grove near his home in upstate New York to pray upon the validity of these competing churches. As Joseph began to pray, a dark force (Satan) came upon him and bound his tongue. Smith, in *Joseph Smith-History* (2006) describes the following events:

> But, exerting all my powers to call upon God to deliver me out of the power of this enemy which had seized upon me, and at the very moment when I was ready to sink into despair and abandon myself to destruction—not to an imaginary ruin, but to the power of some actual being from the unseen world, who had such marvelous power as I had never before felt in any being—just at this moment of great alarm, I saw a pillar of light exactly over my head, above the brightness of the sun, which descended gradually until it fell upon me.
>
> It no sooner appeared than I found myself delivered from the enemy which held me bound. When the light rested upon me I saw two Personages, whose brightness and glory defy all description, standing above me in the air. One of them spake unto me, calling me by name and said, pointing to the other—*This is My Beloved Son. Hear Him!* [Joseph Smith-History 1:16-17, 2006]

Jesus Christ and the Heavenly Father (God) instructed Smith that an apostasy has befallen the Earth, and that none of the existing churches are true. Over the next several years, Smith received visions from an angel named Moroni that revealed the existence of Christ's lost testament and Smith's role as a restorative prophet.

Then, in 1827 at the age of twenty-one, Smith recovered the Golden Plates from the Hill Cumorah in upstate New York. The translated plates became known as the Book of Mormon, an account of Christ's gospel in the ancient (600BCE to 400CE) Americas. As one Mormon scholar notes, "this record implied that contemporary American Indians were descendants of two small groups that had left Jerusalem just before its destruction by Nebuchadnezzar in 587 BCE. A righteous line within one of the groups maintained a Bible-like prophetic tradition which at the time the book was compiled was about to come to a violent end" (Bush 1993:1).[v]

Church Structure and the Priesthood

The Church has experienced numerous transformations over the years. Change however is regarded as natural, for Church

members view living prophets capable of receiving new divine doctrine and revelations. Accordingly, the Church is hierarchically organized, with the First Presidency, the Quorum of Twelve Apostles, and the Quorum of the 70s relaying official Church doctrine, authoritative positions, and general accounting to 12.5 million members worldwide (176th General Conference 2006). However, local LDS Churches consist of a lay clergy so that all individuals of a certain age and gender may hold various positions. These positions last from a few months to a few years, and represent 'divinely inspired' voluntary Church appointments. However, only faithful LDS men may hold the priesthood—the authority and divine power to act in the name of God. Because only men are eligible for authoritative positions, the powers, and benefits of holding the priesthood, there is a gender dichotomy of spiritual and social power within the Church. Later, a discussion of Mormon gender roles demonstrates that one's gender results in differential capital access and social opportunities.

Theory

This paper looks at how Mormon communal social networks provide access and accumulation of differential goods and services that are relegated along lines of gender and religiosity. As such, these social networks and the goods and services that they provide are contextualized according to Pierre Bourdieu's notion of *capital*. Broadly defined:

> Capital, which, in its objectified or embodied forms, takes time [and costs] to accumulate and which, as a potential capacity to produce profits and to reproduce itself in identical or expanded form, contains a tendency to persist in its being, is a force inscribed in the objectivity of things so that everything is not equally possible or impossible. [Bourdieu 1997 [1983]:46]

In other words, capital, in its many forms, requires some cost (which may vary from form to form, from individual to individual) to accumulate, convert or invest into additional forms of capital. Importantly however, capital embodies an existence apart from the individual. Capital, as an object onto itself, gathers some of its meaning, value, and reproductive capacities from the institutional structures from which it is a product (Bourdieu 2006:188). In the Mormon example, this broad definition of capital allows one to look at the interconnections of various goods, services, and statuses as they translate not only to further acquisitions, but to life possibilities as well. Additionally, the institutional structure of Mormons, both the official Church hierarchy and the informal group consensus, inscribes unique meanings, values, and rates to these various forms of capital. Member acquisition and the use of such Mormon defined capital serve to reproduce the institution and orthodoxy in which it exists (Bourdieu 2006:188).

The various concepts and forms of capital are "among Pierre Bourdieu's most distinctive contributions to critical theory" (Beasley-Murray 2000:100).[vi] Outlined as economic, social, cultural, and symbolic, these generic categories of the various forms of capital represent the multiplex of ways through which society acquires and transmits values and possibilities. These variable forms of capital are not homogenous categories onto themselves and rather exist as overlapping, interconnected forms. Though many social scientists add further macro categories of capital or subdivide existing categories, this paper does not seek additional divisions (Ong 1999:92). Rather, the following examination remains faithful to Bourdieu's categories of capital and conceptualizes capital forms according to Mormon cultural views.

Bourdieu (1997 [1983]:54) identifies economic capital as "the root of all other types of capital…[though] never

entirely reducible to that definition," in that, all other forms of capital—social, cultural, and symbolic—conceal "the fact that economic capital is at their root;" that, all other forms of capital serve to be converted into further economic capital. Aihwa Ong (1999:90-91) takes a divergent approach. She argues that "under the current conditions of 'time-space compression' associated with flexible accumulation, it is primarily economic capital that is being converted into all other forms of capital, not the other way around." I argue, however, that rather than economic capital as the base for future capital acquisitions and conversions, Mormons utilize their communal social networks (social capital) to acquire other forms of capital and life opportunities.

As stated above, social capital is understood here as the social networks and prestige afforded to members of the LDS Church. Cultural capital, defined as behaviors, materials, or institutionalized forms that indicate (high) cultural competence, is understood as knowledge and adherence to doctrine and role expectations (Bourdieu 2006:186-187; 1997 [1983]:47). Symbolic capital, arguably the most nebulous of the four, is a credited value determined by group consensus, and which may include forms and meanings of cultural, economic, or social capital (Bourdieu 2006:178-179). For example, one of the most highly valued commodities of the Mormons, Eternal Salvation within the highest level of the Celestial Kingdom, occupies the overlapping position of symbolic and cultural capital.[vii]

In her article, "Fengshui and the Limits of Cultural Accumulation," Ong (1999) argues that capital values do not exist independently from the individual possessing or seeking to acquire them. Indeed, "Bourdieu has never suggested that there are any structural limits to the accumulation of…capital other than the shifting criteria of what constitutes…capital in time and place" (Ong 1999:91). However, meanings ascribed onto individuals, bodies, and behaviors by the prevailing

institutions of a society may limit or bar access to (equal) capital accumulation. Ong (1999:91-92) states that:

> Where there is accumulation and credit, there must be loss and debit. Indeed, the reproduction of social power, especially for the newcomer deploying start-up symbolic capital, is never guaranteed or certain, especially when he or she embodies other signs—for example, skin color, foreign accent, and cultural taste—that may count as symbolic deficits in the host society...The point is not that money cannot buy everything, but that accumulation of symbolic capital can only go so far in converting prestige and honor into social capital that will increase access to institutionalized relationships of mutual acquaintance and recognition in particular cultural economies.

In the Mormon cultural economy, differential access to capital, particularly those of the social and cultural forms (though, since all forms of capital overlap and interconnect in complex webs of transactions, all forms of capital are ultimately influenced), perceived religiosity, gender, and ethnicity determine opportunities of acquisition. The best way to understand the differential capital acquisitions of the Mormon economy is to conceive of the LDS Church as a "club" and the various forms of capital as "club goods." The second prong of my theoretical approach incorporates club theory into the analysis.

"A club is a voluntary group deriving mutual benefits from sharing one or more of the following: production costs, the members' characteristics, or a good characterized by excludable benefits" (Sandler 1997:335). As such, three distinct features define the production of club goods. First, the goods and services that a club provides require that the production costs be spread among its members. Second, "the production process has positive externalities in that the more members contribute in [capital] the higher [the individual and group] benefits" (McBride 2006:7). Finally, clubs must have mechanisms in place that overcome problems with free-riders.

That is, in any joint production, certain individuals will invest more capital and labor for a good than others. The club, through hierarchy rule or group consensus, must invoke ways to not only identify free-riders, but to sanction their access to the goods and services of the club.

The Church of Jesus Christ of Latter-day Saints fits particularly well into this "club" rubric.[viii] Indeed, one could view the Mormons as encompassing the epitome of club production. There is an incredibly strong emphasis on group production, ingenuity, and self-sufficiency within the Church. Stemming not only from doctrinal sources, but also from shared group historicity, members of the Church readily recall the years of persecution, displacement, and hardships that the early Church underwent during the leadership years of Joseph Smith and Brigham Young. The lessons of communal solidarity and production that enabled these early Mormons to survive remain important to members today; members evoke these shared memories when describing the ideal traits of the Saints.

When conceiving of the club products that the Church creates and provides for its members, the most valued product is Eternal Salvation. Members are expected to "help each other to grow spiritually." This phrase—repeated in various manifestations in Church talks, conversations, and publications—coincides with the previously described characteristics of the communal orientation of the Mormons, that each is responsible for taking care of fellow Brothers and Sisters (Ensign 1999:28, 1996:34; Morrison 2000, 1999; Perry 2001). Additionally, the reified symbolic and cultural capital artifacts of Eternal Salvation take the forms of Temple rituals, Sacrament, and various lay clergy callings. Among other club products offered, the Church, through the financial obligations of its members, also provides official LDS services, such as welfare assistance, Family Services (which includes adoption and medical services), and job placement. Unofficially, the

members provide one another with psychological support, domestic aid, and welfare support. An expanded version of each form of support is available below within the context of Mormon communities in Colorado.

Monitoring the Members

With regard to free-rider monitoring, the Church employs several mechanisms. The goods and services briefly outlined above exist on a sliding-scale of a "menu of club good[s] such that the more a member contributes, the more excludable benefits that person receives" (McBride 2006:3). As such, there are both official and unofficial techniques of surveillance to determine the relative input of various members into the "club," and to delegate appropriate access to the production goods provided. Officially, the Church hierarchy utilizes both bishop interviews as well as home/visiting teachers when monitoring its members.

Bishop interviews are annual or bi-annual events during which members individually meet with local bishops to discuss their lives and spiritual status (or their level of adherence to Church doctrine and commandments). This official examination of religiosity is often used to determine worthiness of future Church callings, as well as access to the Temple (the most readily excludable benefit of the Church) (Bullough and Malan 2005:95, 97; McBride 2006:24). Likewise, home/visiting teachers meet with individuals and their families in their abodes, perceive any physical or spiritual needs of the home, and report back to Church officials (McBride 2006:23). The former prophet and leader of the Church, Ezra Taft Benson (1987:5), relayed that "home teaching in not just another program. It is the priesthood way of watching over the Saints and accomplishing the mission of the Church."[ix]

Such official surveillance techniques that the Church utilizes on its members have the dual edge effect of offering

future capital acquisitions (—if one has 'high' religiosity, he/she may be offered future opportunities of symbolic and cultural capital in the forms of callings and/or access to rituals) and withholding certain capital acquisitions and opportunities if seen as religiously delinquent. The doctrine of the Church's divine charter warrants such intrusiveness. As mentioned above, a living prophet who directly communicates with God leads the Church, while all worthy male members hold the priesthood, or the divine authority to act in God's name. Therefore, members perceive all policies and actions carried out in the name of the Church as possessed with heavenly sanction (McBride 2006:27).

Church members also appropriate informal means of monitoring members. Most aptly described as a "fishbowl effect," the Saints constantly watch one another. This should come as little surprise within such a tight-knit, time demanding community that boasts "as much as 400 to 600 hours of voluntary labor per week" per ward (McBride 2006:11). In a conversation about relationships with a twenty-something LDS female, she relays:

> The place we like to hang out, the Institute [an auxiliary LDS building], everyone there knows that we are engaged. And they have been watching our relationship for the past year. I mean, we started dating and a month later people were saying, "when's the wedding?" You know, people really keep track of you here...[they] gossip.

Indeed, observations from members, both within Church settings and wider community settings, "make disobeying *church* [*sic*] rules subject to *community* sanctions" (Phillips 1998:127). Perceived religiosity and communal input determined by other Church members has profound impacts on the benefits of formal and informal goods that one may access. As argued above, the social networks or social capital available in the Church are most valuable in their abilities to translate into other Church and member supplied goods, services, and

opportunities. As such, "good standing" within these social networks supplies a multitude of benefits; "poor standing" results in exclusions of not only official Church capital, but informal co-opts and member assistances as well. The various forms of Church capital, its differential acquisitions, and its menu of excludability are more fully discussed in the Colorado case-study below.

Research

For the past 18 months, I undertook ethnographic research with LDS communities in Fort Collins and in the Denver-Metro Area, Colorado. While these two communities share many commonalities, such as geographic proximity and immediate levels of Church hierarchal oversight, they differ demographically. The Denver area community is largely, though not entirely, composed of individuals with established nuclear families of their own. Alternatively, the Fort Collins community is largely composed of single, young adult Mormons who attend Colorado State University. Furthermore, each area consists of numerous wards (or micro-Mormon communities). I specifically chose the wards in this study for their different characteristics, which enable a comparison of age cohorts as well as life histories.

It is important to note that the information, data, and insights provided here are preliminary in nature. While the qualitative and quantitative data gleaned from my informants shed important light on the nature of Mormon social networks and their access to differential goods and services, one must avoid the temptation to view the conclusions as encompassing. Indeed, the variations of maneuvering tactics employed by these individuals are just beginning to be uncovered.

During the course of my participant-observation work with the Mormons, I was privy to a plethora of behaviors and activities. As previously mentioned, the Church of Jesus Christ

of Latter-day Saints demands substantial time and labor from its members. In a recent *60 Minutes* interview, the current president of the Church, Gordon B. Hinkley, states: "It [the Church] is demanding, and that's one of the things that attracts people to this Church" (Stark 2005:83, quoted in McBride 2006:18). My time spent with the community solidifies this fact. In a survey I conducted among LDS college students (*N*=23), 78% identified spending over five hours a week at official Church activities and duties. Of those, 61% claimed to spend over seven hours a week attending and performing these same functions. Clearly, for college students, many of whom also hold part-time jobs, involvement in the Church demands substantial time and labor investment.

The activities and obligations of the Church also vary since some are more important, or requisite for good standing (i.e. religiosity), than others. Of the range of activities and obligations, weekly Church services (which last three hours on Sunday), Church callings (which can vary in time and labor), and visiting/home teaching duties are three of the most important. However, this is not to diminish the value of the other Church functions. Members also cite Family Home Evening, supplemental Church classes, Firesides, dances, and other sanctioned Church activities (i.e. camping trips, playing sports) as other popular Church activities.[x] Indeed, at the Institute building (an adjunct LDS building for college students), there exists a board on the wall that lays out the official Church activities for a given month. It is not uncommon for at least one activity to be scheduled for every day of the week!

In addition to time and labor required for official Church activities and duties, there are also economic costs to be a member of the LDS community in "good standing." Tithing is "an integral element of the religious practice of the Church of Jesus Christ of Latter-day Saints" (Dahl and Ransom1999:704). Tithing, with origins in the Old Testament,

is the practice of donating one tenth of one's income to God, or the Church. Later, Joseph Smith made the practice of tithe a commandment: "[Latter-day Saints] shall pay one-tenth of all their interest annually; and this shall be a standing law unto them forever…" (*D&C* Section 119, Verse 4).[xi] In addition to donating 10% of one's earnings to the Church, members also contribute a monthly "Fast Offering." Fast Offering entails forgoing two meals on the first Sunday of every month, and donating the money saved to the Church's welfare program. There are also other circumstances for a monetary donation, such as to help a member or family in need or to raise money for a young man's mission. Indeed, missions may be the greatest cost and time demand imposed on young men and their families. All worthy young men from the ages of 19-21 are "highly encouraged" to participate on a two year mission funded through personal means. Despite the high economic and labor costs, a returned missionary (endearingly referred to as an RM) entertains substantial social (RMs are highly sought after by potential mates), cultural (eligible for higher positions in the Church), and economic (usually immediately placed in a job by a fellow member) capital opportunities.

It is here that I would like to diverge slightly, and relay two brief anecdotes. The first anecdote pertains to an RM acquaintance who recently returned from a two-year mission in Argentina. In our discussions, he divulged that within the year, he would be married. Surprised, I inquired about his fiancée whereupon he responded that he was not currently dating anyone. Rather, he said that it is not uncommon for returned missionaries to find a partner and marry quickly.[xii] About a year later, when I next encountered this RM, he was indeed married and employed with a respectable income—a job he obtained through the bishop of his ward.

The second anecdote relates to a recently engaged young woman. During a discussion about the ways in which

the Church and its members help one another find employment, she relayed:

> I would say that's really common [for members to help one another find employment.]. If a member of the Church that has a job opening, then, you're likely to get hired. I have a lot of friends [that] find jobs through members of the Church. It means that you don't have to go through that [the hassle of job searching], because they [Mormon employers] know that you are a hard worker, you're responsible...I mean there's that board we have back there (points to the back of the Institute) with all the missionaries' names on it, and there's a corner on it devoted to jobs offers. I had a friend working at an engineering company, and he found out about that job because he's Mormon and Elder Johnson, the guy who owns the business, he's Mormon too, and he put up his job [offer] so that a lot of Mormons would see it.

These anecdotes are not unique in the Church. They provide examples of the informal reciprocity that Church members exchange with one another. As mentioned above, other informal exchanges among members include, but are not limited to babysitting and preschool co-opts, employment networks, friendship/dating pools, domestic/household assistance (help with meals, chores, home improvement projects, moving, etc.), and learning new skills (food canning, quilting, carpentry, etc.). Members earn the right to enjoy these informal services through "fishbowl monitoring." That is, members will relegate amongst themselves to whom they will provide assistance, based not only upon religiosity and standing in the Church, but also through previous costs or involvement they had input into the informal exchange network.

Additionally, the particular goods and services that members both seek and provide are often delineated according to gender roles. Women with families almost exclusively identify the Relief Society (an exclusive and compulsory female group of the LDS Church, as compared to the all-male Priesthood Quorum) as their main source of personal

assistance. For example, in one particular ward, the mothers in the Relief Society organized a co-op pre-school program. The program requires that the mothers themselves team-teach on a rotating schedule in groups of two or three. This allows the mothers to not only form solidarity friendships with each other, but also enables "days-off" from child rearing, thus providing substantial psychological benefits. In another example from the same ward, a highly involved and respected member of the Relief Society became ill and bed-ridden in her final trimester of pregnancy. The members of the Relief Society took it upon themselves to informally organize (in that there were no assigned duties) to provide meals, housekeeping, car rides, babysitting, and company for her and her family.

Men on the other hand more often seek informal assistance through bonds formed with other males in the Priesthood Quorum. Whereas women seek and offer assistance according to their domestic roles, men's assistance follows along the "head of the household" role. That is, most men offer and seek assistance with home improvements, automotive repair, job searches, investment opportunities, and youth sports coaching. As well, men acknowledge that they largely participate within the formal redistributive Church economy. Official goods and services (that the priesthood hierarchy controls), though accessible to anyone of good religious standing, are primarily sought by the patriarch of the family. Additionally, the husband more often pays the formal economic costs and input into the Church, in the form of tithe and Fast Offering. Since males are expected to be a family's economic provider, spiritual authority, and "decision-maker," their more frequent involvement within this aspect of the LDS Church club economy fits within their expected gender role.

Social capital as social networking is imperative for Church goods access, particularly in the informal reciprocity based market. However, membership in these networks is based upon adherence to doctrine (not being a social deviant)

and upon maintenance of social bonds (not free-riding). As such, I conducted an ego social network analysis (SNA) (Fig.1) and mapped out an LDS member's social capital—individuals whom she relies upon for various aid, assistance, or mentoring. Though the network represents one individual, her social connections are not unique. The ego SNA demonstrates that the vast majority of the individuals upon whom she relies for psychological support, role modeling, guidance, economic aid, job assistance, academic assistance, and "insurance" (those whom she feels will aid her during unexpected life crisis) are members of the Church of Jesus Christ of Latter-day Saints. The interconnections between these individuals also testify to the strong communal bonds and networking in which Mormons submerse themselves. Indeed, when questioned about the significance of these connections, she replied that Church membership means that "you have a friend wherever you go."

Involvement in the Church, however, does not always provide positive capital. The costs for being a member in "good standing" in this club, as outlined above, are significant. In a recent talk during Sacrament Meeting, the message was that one's duties to the Church and family (viewed as separate but not mutually exclusive categories) should take precedent above all others. Obedience to this view may bring about "great blessings," of which God will "expand the days" allowing for the completion of other tasks and obligations—though only if one has put the obligations to the Church first.

Adherence to role expectations also involves sacrifice. Mormon females, though encouraged to seek secondary degrees, are expected to fulfill their roles as wives and mothers. As John Milhelich and Debbie Storrs (2003:410) note in *Gender and Society*, "[Mormon] women should find a spouse within the faith as early as possible to take full advantage of their childbearing years." Likewise, the monetary expectations of a husband and father require that some individuals pursue careers for economic sustainability rather than for personal

fulfillment. For example, I met one individual in Utah who had just begun a family. Rather than pursue studies in a field for personal interest, he decided upon a career path thought to provide more realistic job prospects. And indeed, through Church connections, he was able to procure a job in this field, one that may not have been so readily available to a non-member.

Analysis

As argued above, the Church of Jesus Christ of Latter-day Saints is a communal organization that emphasizes the self-sufficiency of individuals, families, wards, and the Church as a whole. While in practice, the LDS club is not completely self-sufficient—all members do rely on the wider global capitalist market for capital acquisitions—members attempt to limit their dependence on these outside sources. Embodied in the symbol of the "deseret," or the honeybee, the Church encourages and expects its members to operate as an organized, industrious, and self-sufficient "hive" (McConkie 1979:190). Accordingly, members endeavor to grow their own food in gardens and maintain a years' worth of food and funds, all in an effort to decrease reliance on outside institutions.[xiii] At the same time however, the Church expects each member to contribute time, energy, and resources to the club, not only for membership, but also to receive goods, services, and prestige in the community. As my research demonstrates, gender dictates the types of club input required and the types of output available for members. Similarly important however is a member's doctrinal adherence, insofar as it reflects the available menu of club goods that the LDS Church supplies.

The Church uses various mechanisms of surveillance, through official and unofficial means, to determine both religiosity and the levels of activity of the Church's members. As such, goods, services, and opportunities the Church offers

exist on a sliding scale of excludability. McBride (2006:20-21) offers the following summary:

> Many benefits produced by the LDS Church are not excludable in any practical sense. Sunday or other worship services and various social activities cannot only be attended by perfectly identified free-riders, but they are also open to non-members…Some benefits are much more excludable in practice. Although exceptions are not uncommon, only those who actively contribute (fulfill callings) and comply with behavioral codes or rules (chastity, tithing, etc.) to some degree are generally granted access [to] the Church's welfare services, family services, and employment services, and these services are always only given temporarily according to official policy. The most excludable benefit according to official LDS policy is access to the temple…The Church's harshest punishment is excommunication, which denies access to temples and all welfare services, voids the efficacy of that individual's previously performed saving ordinances (baptism, etc.), and even, technically, eliminates the individual's permission to partake of the sacrament (communion).

As such, failure to live up to expectations as a member limits the amount of Mormon cultural capital as ritual access, symbolic capital as Eternal Salvation, and economic capital as Church welfare and employment services. Furthermore, membership expectation failure can strain social network relationships within the LDS community. In summation, "the highest contributors gain access to all possible benefits, and the lower one's contribution, the fewer benefits to be accessed" (McBride 2006:22).

Members also have differential access to capital on the basis of gender. While some goods and services are officially excluded to certain sexes, others are more frequently available to one gender or the other (e.g. the types of reciprocal aid sought and offered). And while the Church justifies official gender excludability under a "different-but-equal" discourse, the exclusion nevertheless offers differential opportunities to capital and life possibilities (Beaman 2001; Mihelich and

Storrs 2003). As a rigidly patriarchal institution, worthy men in the Church enjoy greater access to power, authority, and life opportunities than women (this does not however diminish the roles and spheres of influence that females occupy). Rather, my research suggests that as household leaders and decision makers, men play more of a pivotal role in the distribution and access of some official Church resources.[xiv] Indeed, it seems that men can operate in much wider frames in both the redistributive sense, and in informal, reciprocal forms of capital exchange. This observation is evident in a satirical cartoon (Fig. 2) from the July 2004 issue of *Sunstone Magazine*, a heterodoxic Mormon magazine that "sponsor[s] open forums of Mormon thought and experience" (Sunstone 2006). The cartoon exemplifies not only the gender roles encouraged by the Church, but also the differential access to cultural and social capital members enjoy.

Despite these naturalized, divinely ordered gender roles that lead to differential access of capital types, power, and life opportunities, many Church members do not see these differences as unequal.[xv] Indeed, perhaps this is where perspectives of the etic and emic diverge. In interviews with Church members, I often heard the statements "different but equal," or "separate but equal." Further, one informant stated, in response to possible gender hierarchies in the Church, "Not really, the only people I've met who have thought that have been either non-members or a minority of members who don't actually listen." However, in accordance with Ong's views of differential capital value and accumulation, as well as Edward Said's (1978) work with "self and other," the discourses of equality largely depoliticize and naturalize the afore mentioned gender differences and inequalities. Males have wider access to positions of prestige within the Church, greater endorsed movements within the religious and public spheres, and have greater control of household resources as the "head of the household." Whereas women largely fulfill traditional

domestic roles, they exert less outward displays of power and capital accumulation than their male counterparts. However, that is not to say that there are not multiple points of resistance and space for tactics. Indeed, there are changing role expectations for women (such as simultaneously endorsing motherhood and college educations) as the number of Mormon women in the workforce increase, and as the heterodox Mormon feminist movements shake the traditional patriarchal structure. These changing roles enable many Mormon women to experience new avenues of maneuverability (Beaman 2001; Hamel 1990:48; Mihelich and Storrs 2003).

Conclusion

This paper argues that the Church of Jesus Christ of Latter-day Saints offers its members differential access to goods, services, and capital according to perceived religiosity (determined through commitment and doctrinal adherence) and gender. The applications of various theoretical perspectives such as Bourdieu's variations of capital, Ong's differential capital access, and Sandler's club theory reveal that Church members exist in a strict communal club. This club provides its members with a wide variety of goods; spiritual growth and salvation represent the ultimate benefits of Church membership. It is only through strict adherence to club rules (i.e. adherence to the doctrine and commandments) as well as individual investment in the group that members can hope to reap significant benefits.

The discussions in this paper offer a glimpse into the various forms of capital, goods, and services to which Church members are privy. Though economic capital may provide a base access to all other forms of capital, social capital produces both the formal redistributive and informal reciprocal exchanges that operate within the LDS Church. That is, the intricate and strong social networking bonds between members

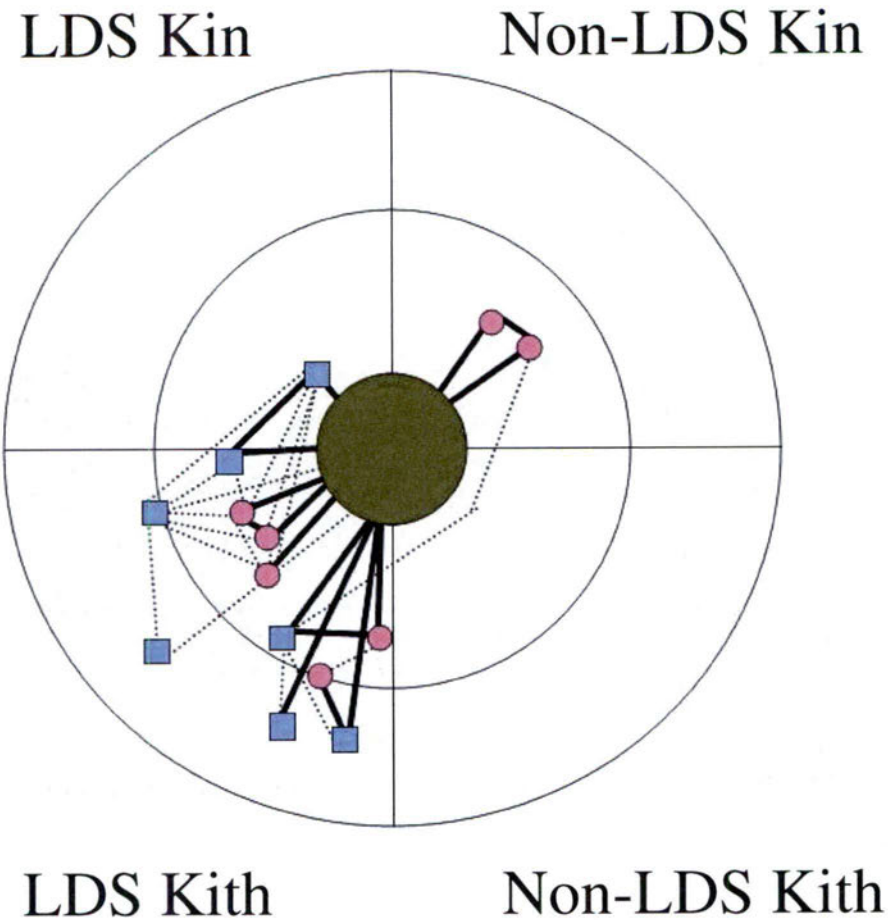
provide access to available goods, services, and opportunities. Indeed, the communal historicity of self-sufficiency (the deseret) does have a reified existence for many of the Saints.

The Church monitors its members in various ways and distributes services amongst its members according to religiosity, gender, and (historically) ethnicity.[xvi] That is not to say that there are not forms of resistance. Since a living prophet, who is capable of receiving new divine doctrine and guidance, leads the Church, wider socio-cultural and political-economic views of the wider Western fabric undoubtedly influence decision-making processes of the Church.[xvii] As such, future avenues of inquiry will need to explore these forms of resistance and change. In particular, how do marginalized populations negotiate and seek access to wider avenues of capital, power, and prestige within the LDS community, how are gender roles being changed by wider cultural influences, and how do the systems of exchange differ in diasporic LDS populations?

That being said, it is only fair that I provide my informants with the last word. None of this research would be possible without their assistance. With regards to whether increased involvement in the Church allows for further social, economic, and "standing" opportunities, my informant and friend, replied:

> Yes, partly because you have fellow members to become friends with and practice social skills with. Also, if a member needs employment or help with something, there is normally at least one member in the ward or stake who could help.

Figure 1



Blue Squares = Male Alters
Pink Circles = Female Alters
Strength of Line ~ Strength of Social Bond
Position Relative to Center Circle ~ Perceived Value and Closeness of Alter to the Ego

Figure 2

'Upcoming activities: the Young Men will be going bungee jumping, getting ready for their river rafting trip as well as horseback riding and working on their cliff diving and archery merit badges. The Young women will be trying a quilt.' (July 2004 *Sunstone*)

Source:
http://www.sunstoneonline.com/cartoons/mag_cartoon_details.asp

Notes

[1] For the Mormons, Sacrament Meeting is akin to Catholic Mass. The Church maintains congruency with its 27,000 wards through the Salt Lake City, Utah hierarchal core where it lays out yearly lesson plans for all wards and stakes (akin to dioceses).

[2] The Church uses a variety of mechanisms to build an imagined Mormon community from a wide range of individuals and cultures. Among these are the use of Missionaries (usually men 19-21 years old) and charismatic

public events; e.g. testimony sharing; a bi-annual General Conference Meeting broadcast live to every Ward and Stake in the world.

[3] LDS theology propagates that all people are the spiritual offspring of a Heavenly Father (God) and Heavenly Mother. As such, all are Brothers and Sisters to each other. The purpose of the Earthly existence is to grow spiritually and to return to our Father in Heaven, if worthy enough.

[4] See *Joseph Smith-History* (2006), on pioneers: http://lds.org/churchhistory/content/0,15757,4079-1-2134,00.html, or the monthly *Ensign* magazine.

[5] The Book of Mormon concludes around 421BCE with the Lamanite society destroying (through genocidal warfare) the Nephite society. The Church views most Native Americans as Lamanite decedents.

[6] Bourdieu's notions and views of capital; in particular, "cultural capital," are often viewed as the essence of Bourdieu's contribution to social theory – often to the unfortunate neglect of "habitus" (Beasley-Murray 2000:100).

[7] Mormon theology identifies three levels, or Kingdoms of Heaven.: the Telestial, Terrestrial, and Celestial. Each are further subdivided into "levels." Only worthy Mormons who adhere to the doctrine and perform all Earthy ordinances (such as baptism and Temple marriage) may enter into the highest level of the Celestial Kingdom (McConkie 1979:348). Those who attain the highest level have the opportunity to become a god or goddess.

[8] For a particularly in-depth analysis of how the LDS Church operates as a club, see Michael McBride's (2006) dissertation, "Club Mormon: Free-riders, Monitoring, and Exclusion in the LDS Church."

[9] A living prophet or "president" leads the Church of Jesus Christ of Latter-day Saints. Divine ordinance helps to choose this life-long position.

[10] Family Home Evening (FHE) is on Monday nights and is traditionally held in a family's home. The FHE is an opportunity for families to spend time together, participate in various activities and games, share with each other, and to learn about LDS scripture. Since the CSU LDS students are away from their nuclear families, the Institute holds FHE as a kind of proxy family/home. Firesides are supplemental Church services, held usually once a month, on Saturday or Sunday evenings.

[11] It is interesting to note that there is a schism among Church members about whether tithing is 10% of *gross* or *net* income. The official Church hierarchy takes an ambiguous stance, stating that "every member of the Church is entitled to make his own decision as to what he thinks he owes the Lord and to make payment accordingly" (cited in Dahl and Ransom 1999:705).

[12] Interviews with other members and my surveys support this response. Female LDS members cite returned missionaries as extremely sought after as dating and marriage partners.
[13] The LDS Church is a millennial religion (as in "Latter-days"). As such, these measures are to prepare for the Second Coming of Christ, after which the world's many social and governmental institutions will collapse. In other words, greater self-sufficiency will increase the chance for survival.
[14] Even Eternal Salvation is more accessible to men than to women. Interviews with several "jack-Mormons," or former/inactive LDS members, relayed that during the Temple marriage ceremony, both the husband and wife receive "spiritual names." However, while the husband's name remains a secret to his bride, the husband has access to his wife's spiritual name. Upon entry into the Celestial Kingdom of Heaven, the male "gets to decide" whether or not he wants to "call up" his wife and spend eternity together. For more information, see http://home.teleport.com/~packham/temples.htm.
[15] An LDS statement entitled, "The Family: A Proclamation to the World," views gender as "an essential characteristic of individual premortal, mortal, and eternal identity and purpose" (Ensign 1995:102-107).
[16] It was not until 1978 that African-Americans (also popularly understood as anyone of "non-white" ancestry) were allowed to hold the Priesthood.
[17] There are numerous examples of the Church influenced by contemporary social movements. The most notable examples include the abolition of polygyny in 1910, the Civil Rights movement (allowing various ethnicities to hold the priesthood), the women's liberation movement (acknowledging women's education and role in the work-force), and views regarding the Word of Wisdom (relaxing the prohibition of carbonated caffeine beverages, e.g. Coke).

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The Pine Ridge Economy: A Substantivist Approach

Benjamin Jewell

Abstract- *Native Americans are often idealized as the first conservationists, but are denigrated as "inauthentic" when their environmental practice includes considerations other than conservation. An industrial model of conservation is imposed onto native communities where animistic models of nature still prevail. On the Pine Ridge Reservation in South Dakota, there are Lakota values that may enhance wildlife habitat, but from a Lakota perspective are motivated by beliefs and experiences that are not primarily aimed at conservation. Further, the imposition of Western science and market capitalism not only conflicts with Lakota animistic beliefs, but also drastically alters how natural resources are used. This paper conceptualizes the economy as resulting from human-environmental interactions which are shaped by local conditions, and further elaborated by cultural beliefs and norms, and therefore unique to each society. Employing a substantivist approach, I will explore the interactions between individual ethics and actual conservation behavior as existing in three layers. At the grassroots layer, defined through individual and family relationships, spiritual ties to nature are generated through various Lakota animistic beliefs, including equality across species and individuality in defining relationships between humans and other beings. Replacing cattle with the native buffalo is one strategy that symbolizes Lakota cultural perspectives on restoring the lands for both spiritual renewal and sustainable yields of wild plants and animals. At the tribal or political layer, Lakota politicians often use Lakota "traditions" strategically to reassert tribal*

sovereignty and control over natural resources and development policy, as well as to legitimize their quest for mainstream political spoils. The final structural layer, which exists at the federal level, where individual beliefs are often violated by the dominant conservation paradigm, relies on scientific validity and rational instrumentality to reduce nature to a set of maximum harvest limits.

Natural resources are one of the fundamental elements of all economic systems. How those resources are manipulated and exchanged by the individual reflects the culturally constructed guide for social and environmental interaction. In a capitalistic system, individual gain is favored over equal distribution of resources, and the environment is a tool for perpetuating the production system. Also, the individual consumer is removed from the source and methods of resource exploitation. By contrast, an economic system based off of the immediate interaction between a human social group and the surrounding environment will likely produce a much different set of beliefs in regard to natural resources. Thus, it is not only the economic institution which is critical to understanding natural resource conservation, but also the religious or symbolic institution. This interplay between the economic and symbolic institutions can be further complicated by the legacy of forced assimilation of indigenous groups into the dominant society. One example of this can be seen in the modern Lakota of Pine Ridge, who must balance their traditional economic and social practices with growing immersion into the market system. This paper will describe the difficulties faced by Lakota individuals in maintaining adherence to symbolic beliefs in relation to natural resource conservation, due to the enforcement of Western beliefs in science and market-capitalism. To do so, I will employ a substantivist theoretical perspective to describe the interaction of competing forms of resource use.

Methodology

This analysis relies on data collected from Pine Ridge by Dr. Kathy Pickering and several collaborators and student assistants. Since 2001, Dr. Pickering has conducted surveys with randomly selected households throughout the reservation to understand modern economic realities of reservation residents, and how they negotiate those realities within a cultural model of prescribed behavior. Sources of income are explored in detail, including wage-based, self-employment, and the various government sponsored programs that provide financial assistance to low income families. This information is correlated with where the income is directed for expenses, allowing for calculation of average monthly expendable income. In addition, information regarding social capital, interpersonal relationships that can be used for accessing material resources outside the marketplace (Putnam 1994:33-34), the types of goods and services exchanged between social actors, and the level of reliance on wild plants and animals for food resources, helping to clarify when non-market avenues are employed to navigate an imperfect market-economy. Finally, non-economic information regarding spiritual beliefs, connection to the environment, physical health and health care delivery on the reservation, and levels of crime and crime prevention fill out the main categories of information covered in Dr. Pickering's surveys. Through a mixed quantitative and qualitative data set, a fuller explanation of the incredible diversity of experiences amongst the residents of Pine Ridge is gained.

As a student of Dr. Pickering's I have had the good fortune to explore this vast database and utilize pertinent information to my research, in exchange for assistance in keeping the data up to date. For this paper, I have pulled from questions regarding natural resource use and individual beliefs

surrounding the environment, trying to answer the questions: to what extent do Lakota people maintain the traditional animistic belief system, and how does it impact their interactions with the environment? What institutional barriers exist which limit the expression of these beliefs? In what ways does free-market capitalism fail to address the needs of Lakota people, and how do they compensate? What are the historical contexts that have created the current realities, and what options are available for alleviating issues of poverty and environmental degradation? Because I conceive of societal institutions as interrelated, it is my aim to describe the connection between the Lakota spiritual beliefs and how these institutions shape the Pine Ridge economy.

Substantivist Groundwork

In substantivist terms the economy is an instituted process involving the interaction of human social groups with the environment for the acquisition of subsistence resources (Polanyi 1957:243). This model places emphasis on two main elements in all economic systems, the manner in which the economy is embedded in the society, and the process of acquiring and allocating resources. In terms of process, substantivism accounts for two ways in which goods are moved. Locational movement encompasses, "...production, alongside of transportation, to which the spatial shifting of objects is equally essential" (Polanyi 1957:248). The second form of material movements, appropriational, "...governs what is usually referred to as the circulation of goods and their administration" (Polanyi 1957:248). These two terms cover the transformation of material elements into desired goods, and the distribution of those goods through a system of social relations. Thus, when raw materials change place, and then are turned into a desired material good, the movement is locational. When that good is exchanged between hands, either

directly as between a buyer and a seller, or distributed via governing bodies, the movement is appropriational. Locational and appropriational movements cover the process portion of Polanyi's conception of the economy.

The element of societal embeddedness is fundamental to Polanyi's formulation of the economy, and reflects the primacy which he gave to social relations. According to Mendell (2003:2) "[Polanyi's] foundational argument, influenced by Christian philosophy, is that each individual is social in essence...It is our social, indeed, our dialogical nature that governs our lives as individuals, that determines how we identify ourselves in the context of and with others, as well as our membership in social groups." In his own words, Polanyi (1957:249) spoke of social relations as the connective tissue in the structural framework of an institutional economy:

> Nevertheless, reduced to a mechanical, biological, and psychological interaction of elements that economic process would possess no all-around reality. It contains no more than the bare bones of the processes of production and transportation, as well as the appropriative changes. In the absence of any indication of societal conditions from which the motives of individuals spring, there would be little, if anything, to sustain the interdependence of the movements and their recurrence on which the unity and stability of the process depends.

There are four primary means by which an economic system is instituted in a particular society, known as modes of integration in substantivist theory. The first is gift trade, or reciprocity, where two or more groups are linked socially by the exchange of goods or services (Halperin 1984). This form of exchange is relatively rare, and often coincides with non-material benefits such as mutually beneficial social and political alliances (Malinowski 1922). The second mode of integration is redistribution. This form requires a centralized leadership to receive material goods and appropriate them to the members of society. Redistribution can have a highly

ceremonial component where an individual distributes vast quantities of goods as a demonstration of culturally valued trait of generosity (Mauss 1987[1925]), or it can be a more impersonal movement of goods as between two governments in the fulfillment of treaty obligations (Pickering 2000). The third mode of integration is Householding, where a family provides for their subsistence within multiple modes of integration. The key difference between Householding and the other modes of exchange is the way in which goods are moved. There is a more circular distribution of goods as compared to reciprocity and redistribution. In Householding, according to Halperin (1991:96), "goods move among members of a family network rather than back and forth between two points (reciprocity) or in and out from center to periphery (redistribution)." The final mode of integration in the substantivist literature is market-based exchange. This mode requires a system of price-making so that individual actors can engage in exchange of monetary units for want satisfying means. Substantivism allows for the existence of multiple modes of economic integration within the same society, and encourages the analysis of all such modes to present a full picture of the economy (Polanyi 1957:256).

Finally, substantivism recognizes the important influential role the other societal institutions exert on the economy, and aims for a holistic description of the institutional interrelations of a given society (Ortiz 1983:3; Halperin 1984:257-259). For example, the concepts of surplus and scarcity, so crucial to the formalist perspective, are recognized in substantivist theory as independently defined based on the cultural conceptions of subsistence needs (Pearson 1957:321-323). Thus, because every economic system developed via a unique set of historical events, each system should be studied empirically.

Having described the concept of economy as a process by which humans satisfy material wants via the interaction of social institutions with environmental conditions, highlighting

the four modes of integration, I will now apply this concept to the economic system of the Pine Ridge reservation.

Substantivism applied to Pine Ridge

The economic system of the Pine Ridge Reservation is well suited for a substantivist analysis because there are interacting modes of integration, developed via a unique historical process. Due to continued resistance efforts by Lakota people, the market economy is only partially embedded in the culture, leaving reservation residents to rely on their non-market based capital resources, such as kin ties and redistribution systems. Thus, capitalism is merely one system in operation on Pine Ridge (Pickering 2000); to refer only to this mode would obscure the nuanced reality of the economy.

Reciprocity on Pine Ridge is usually activated between kin networks for alleviation of the difficulties inherent in intersecting modes of integration. Lakota emphasis on the kin network, known as the *tiošpaye*, has been both beneficial and restrictive for their integration into the market economy. For the single parent who must work to provide for their children, daycare is often done by a close family member lessening the capital expenditures needed for childcare (Pickering 2000:46). Also, sharing of food resources between kin, whether purchased or acquired via hunting and gathering, is still an operative force for reservation residents.

Redistribution is also present on Pine Ridge in two main forms. First is the redistribution of resources by the tribal government in the form of food commodities and access to means of employment. The tribal government is the mediator between the federal government and the reservation community. There is much internal criticism of tribal governments, who are often seen as the last vestige of American colonialism (Pickering 2000:116). One Pine Ridge resident described the problems with the tribal government as

being associated with the incongruity between expectations from the social system, and the federal government. The tribal council has the power to make political appointments during their two-year terms, so that "people [are] given paid positions by tribal leaders based on nepotism, regardless of their experience." Although nepotism is consistent with social expectations, it produces long-term problems for the wider community.

The second form of redistribution exists on a more individual level, where goods are accumulated for ceremonial giveaways and distributed to the community. The giveaway is a means of balancing income disparities and ascribing prestige to the event organizer through a demonstration of generosity (Medicine 2001:144). Generosity in the economic institution is a residual from the traditional life-way of the Lakota, and is still highly valued today (Pickering 2000). In describing the differences between European capitalism and Lakota systems of redistribution, Deloria (1998[1944]) demonstrates the former's focus on objects or goods, and the latter's focus on social relationships. Despite the incongruity between the two, both aim for "Security...food, clothing, shelter, and an old age free from want...All peoples need that; it is what they struggle for in their respective ways" (Deloria 1998[1944]:119-120). In the modern reservation economy, redistribution can be found in expectations of kin to remain generous and perpetuate the egalitarian nature of the Lakota culture (Pickering 2000:38-39). For Pine Ridge small business owners, an obligation to family members makes difficult the continuation of fiduciary gain which may serve to discredit the businessperson in the eyes of their social network. Therefore, "Despite the cultural ties to the communities they serve, Lakota-owned small businesses are subject to shoplifting, bad debt, and vandalism" (Pickering 2000:39).

Lakota animistic beliefs intersect with the use of natural resources at three fundamental levels. The first level is at the

grassroots layer, where individual perceptions of natural resource utilization are defined by traditional animistic beliefs and practices. Next I will argue that these beliefs and practices are suppressed by the structural layer, which emphasizes Western science and financial gain. The political layer, or tribal government, acts as the connection between these two layers, creating a complex set of obligations and expectations for tribal politicians expected to adhere to cultural and familial demands, as well as the demands of the American imperialist government.

Grassroots Layer

The traditional Lakota beliefs conceive of the natural world as imbued with wakan or power; all beings, and even inanimate objects possess this force (DeMallie 1987:28). These forces guided human action and were to be revered and feared as potentially harmful (DeMallie 1987). The world was conceived of as existing in a state of unity, where humans are merely another member of the natural world. The land is more than a base of resources for nutritive survival; the land is the birthplace of the Lakota people and it is the source of all power (Young Bear and Theisz 1994:27-28). Disrespect towards the land or the natural world represents an affront to the very core of the spirituality which guides Lakota belief and action. Survival for the Lakota meant using the resources surrounding them judiciously (Deloria 1998[1944]). Thus, as Hassrick (1964:246) notes, "Science and religion were not separate-they were one." The way to status in this system is the opposite of the market system in that you accumulate possessions not for personal wealth, but so that you can generously give them away. The end product of this for the individual is prestige, or status.

Property was clearly defined by the Lakota, but the acquisition of more than what is needed does not bring prestige

(Hassrick 1964:296). One Lakota man described the cultural insistence to give as a reflection of greater preference given to non-material considerations:

> We could save things for our kids, and that's, I see it, the land part, and the meaning of Lakota, the traditions, the oral history, those are what we save. The others we can't save, you know, because they're, when we have money everybody knows we have money, they come and you know we gotta give them it…I'm not a greedy person or anything, but it makes us feel like human beings, real good with God when we help…That's the way, it ain't like always the old way, but it makes your blood go good, though you know, level it out all kinds of ways. [P077 FU03]

Put another way by Hassrick (1964:296), "Wealth, therefore, was counted in terms of a man's ability to accumulate for disposal….This principle kept operative by the understanding that to receive a gift implied the responsibility to give a gift in return." Social pressure was exerted to encourage generosity, and scorn those who were selfish. These values were institutionalized in ceremonial activities such as giveaways, where an individual accumulated immense quantities of material goods for redistribution to the community, thereby reducing wealth differentiation in the society (Pickering 2000:57).

It is apparent that many of these traditional beliefs are still operative at the grassroots level, therefore understanding this perspective is critical for comprehending what aspects of past resource management plans have failed. Further, the cultural belief system provides the behavioral alternatives available to the individual for resistance to integration into the dominant society (Medicine 2001:177) and thus rejection of federally imposed practices. From surveys conducted on Pine Ridge in 2003, we can point to individual perceptions of natural resource use and management that reflects an understanding of past modes of resource management. When asked about how

resources were managed in traditional times one man said "[Lakota] let life happen;" another participant said that Lakota practices are "...not the same as European people, [the Lakota] let them [plants and animals] live." The conception of management seems somewhat alien and unnecessary in relation to traditional practices which remove the need to manage resources because life was geared around subsistence off the land. Since the Lakota have been removed from their means of subsistence, management has been imposed upon them via the structural and political layers. Out of 43 respondents asked about current (2003) management practices carried out by the tribal and federal government, only 13, or 30%, had any conception of the practices. I propose that this lack of knowledge about management practices at the grassroots level is a reflection of the refusal by government agencies to integrate native ideas and beliefs into natural resource use.

Another example of how individual conceptions of natural resource are expressed can be shown through recent attempts at reintroducing bison onto Pine Ridge. In terms of management strategies, 90% of those surveyed intended to maintain herds in as close to a wild state as possible, and 70% started their herds for reasons associated with traditional cultural beliefs in the importance of bison (Sherman n.d.). There is also a clear rejection of market distribution and a simultaneous reliance on forms of social capital by most participants: "75% distribute surplus animals for family or ceremonial use...65% rely on family, friends, neighbors or tribal members to help with the herd" (Sherman n.d.). Despite some clear successes, such as the Oglala Lakota College's efforts, several independent herd managers have expressed difficulties in starting bison management plans (Sherman n.d.).

Political Layer

Despite widespread concern for the environment across Lakota

households, the implementation of conservation behaviors appears blocked. The immediate institution responsible for reservation lands and resources is the tribal government. This institutional structure was created in the 1930s, with a heavy hand of U.S. federal oversight. Several aspects of this federally recognized tribal government contradict Lakota conceptions of political legitimacy that were in place before reservations were established. For example, historically Lakota society respected a great deal of local autonomy and had weak or absent centralized leadership. Individual expressions and perspectives were also respected, with great discomfort associated with speaking for someone else or representing their point of view. Decisions were ideally reached through a consensus process, with dissent expressed by individuals avoiding the event or activities with which they disagreed. Leadership was based on group support garnered through generosity, wisdom, and personal sacrifice to the people, with the result that leaders tended to have the most meager personal possessions but were socially wealthy and respected.

In contrast, the structure of the reservation tribal government was a constitutional form of representative governance with ultimate authority vested in a centralized tribal council from each of eight districts elected by majority vote. The new form of government also created the concept of professional politicians who would be paid for their political service and have greater personal wealth than that of the people they represented. A further layer of modernism made tribal government the forum for Lakota people with "progressive" ideas, willing to comply with mainstream notions of development and resource use, often to the detriment or even disparagement of more "traditional" Lakota practices. In this way, tribal government became liminal to both Lakota society and the mainstream political economy, inappropriate and

illegitimate from Lakota cultural perspectives, but often ineffective and inept from mainstream perspectives.

As a result of a largely imposed and imperfect tribal governmental structure, grassroots perspectives on land use and conservation were largely removed from the political process. It is apparent that the individuals at the grassroots layer are unsatisfied with their lack of political agency when more than 55% of those surveyed feel that the tribal government was ineffective, compared to just 19% who feel that it is effective. Federal policies for Indian lands encouraged tribes to lease their lands to non-Indian agricultural interests, particularly cattle ranching. The lease monies, though far below market values in the region, represented one of the few ways the tribal government had of generating revenues to support its own operations and salaries. Given that this form of governance is the only form currently recognized by the federal government, tribal sovereignty depends on the ongoing viability of this notably flawed political system. Therefore, from the perspective of tribal politicians, any alternative to cattle ranching has to generate equal or greater revenues to even be considered. While only about 5% of tribal members are involved in cattle ranching themselves, some tribal members suggest that the regional Cattlemen's Associations exert undue influence over and disproportionate representation on the tribal council.

Structural Layer

At the structural layer, three main mechanisms have served to control the Lakota's expression of traditional values. These mechanisms have been employed by the U.S. government in a similar manner to which all European derived hegemons have imposed their ways of life on indigenous populations (Gramsci 1989). The first mechanism involves enforcement of a new economic system. For the Lakota this has largely been

accomplished through alienation from their resource base and the attempted imposition of agricultural production. Loss of land has been devastating for the Lakota, but simultaneously beneficial to the hegemonic rise of the United States in two ways. The first deals with the cultural and spiritual connections of the Lakota to their homelands. For the U.S., removing the Lakota from their land was instrumental in breaking the grip of Lakota culture on the people. Without alienating the Lakota from their land, the U.S. would never have been able to attempt cultural eradication and economic assimilation.

The second way in which land loss has benefited the U.S. and negatively impacted the Lakota is revealed through the economy. The traditional economy of the Lakota intertwined with their spiritual beliefs, kinship organization, and political structure to compose a whole cultural system (Hassrick 1964; Walker 1982). Upon their migration to the Western Plains, the Lakota became reliant on migratory game and wild plants as their primary food resources (Pickering 2000:2). The introduction of horses from the Southern Plains and rifles from European traders greatly increased the area within which game could be reasonably tracked and the amount of resources that could be acquired at one time (Holder 1971). Although the Lakota were actors in the market system prior to the formation of the United States, largely in the form of the fur trade (Pickering 2000:3), market exchange was never their primary mode of integration; reciprocity and redistribution have always been vital components to Lakota survival, yet the migratory hunting and gathering lifestyle upon which these modes hinged, were incompatible with the 19th century economic and social world of the United States. While handing out land to immigrants in the name of manifest destiny with the right hand, the U.S. government was simultaneously pulling in land from Native American populations with the

left. Reservations provided the element needed for the U.S. to end the nomadic life of Plains tribes, acquire millions of acres of land, and alleviate some of the growing pains of their nascent economy (Jewell 2006). This form of capitalistic manipulation is precisely what Marx (2006 [1859]) was criticizing in Great Britain and France when discussing the removal of an individual or group from their primary means of subsistence. In comparison to the traditional socially embedded economic system of the Lakota described above, the United States was an exemplar of the capitalist ideological system first perfected by European imperial nations in the 17th and 18th centuries (Taylor 1996:9-15), where the market, guided by the concepts of scarcity, rational choice, and the belief in progress through production and technology, becomes the driving force rather than social convention (Polanyi 1957). In the 19th century, capital markets demanded agricultural production.

Although agriculture was never adopted by the Lakota it has had a significant impact on their current life. When formed in 1868, the Pine Ridge Reservation encompassed more than 9 million acres (Stevens 1988:49). In the process of dividing up land during the 1889 Allotment Act, 160 acre parcels of this land were given out to households in an attempt to fracture the communal residence pattern of the Lakota, and to prepare them for the transition to agriculture (Biolsi 1992). When all households had a plot of land, the remaining acreage was deemed surplus and made available to white farmers (Pickering 2000). By defining what was surplus land based on specific notions relating to a market mode of integration the government was able to eliminate 78% of the reservation lands. Since that time, the original parcels have been divided amongst five generations of heirs, and heirs' heirs. Thus, the economic potential of modern reservation residents has been determined in large part by the culturally ignorant practices of past U.S. administrators, and current administrators who base

resource management strategies on non-Lakota values

The second mechanism used to control expression of traditional patterns for resource use is the imposition of Western science as opposed to Native perceptions of resource use. This has been true for all indigenous populations exposed to the colonizing efforts of European and American governments. For example, the Inuit populations of the arctic region have had to gain institutional approval to continue their whaling activities, which have been limited by the commercial over-exploitation of whales by the rest of the world (Freeman et al. 1998). The Lakota have also had their conceptions of the natural world rejected by the dominant ideology which seeks objective, definable 'Truth' (Bourdieu 1977). Using natural resources on the reservation requires the approval of one of many representatives of American colonialism. Survey participants (2003) expressed frustration with the requirement to acquire eagle feathers, a sacred ceremonial item, through the National Parks Department. When asked how eagles are managed by the government today, one Lakota woman said

> They're managed by the government now; they put a restriction on them [eagles]. I don't think we can hunt them, not even for ceremonial purposes. They don't take ceremonial as a holy thing, you know, now they think…you're going to make a sale on it. They got that in the back of their head, gonna make money on it, so then we can't do that anymore. It's gotta be, you have to get a permit from the government. I don't know if you have to pay a fee…I think religion is free (P025, FU03).

Even though access is granted, the insistence on the approval of Western science disgraces and discredits the alternative perspective.

The final mechanism used by the structural layer to control Lakota conservation ethics, is the imposition of a multi-faceted bureaucratic system. On Pine Ridge lands interior and adjacent to the reservation's boundaries are covered by

regulations of the Bureau of Indian Affairs, National Park Service, Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service, and the U.S. Forest Service. Jurisdictional issues between tribal lands and state lands also insert South Dakota land management interests into the mix. As a result, there are no clear answers to basic questions like who has management authority over Lakota lands or what is the process for amending current land management practices. This further distances Lakota people from implementing their conservation ethics on their own lands. This use of overlapping federal agencies has been a strategy of the government since the inception of the reservation, creating confusion over who has control of land and resources, thus perpetuating the status quo.

Results and Recommendations

The result of these interacting layers is a dialectical interaction between Lakota culture, and the structural elements of the tribal and federal governments. Due to a fundamental disconnect in how conservation programs are formulated at the federal level and Lakota beliefs regarding the natural world, there is little grassroots support for existing conservation efforts. The importance of Lakota cultural perspectives are ignored at the political and structural layers when purely scientific explanations for how to manage natural resources, often geared exclusively towards financial gain, dominate. In order to motivate conservationist behavior, there needs to be a greater consideration of Lakota perspectives regarding the spiritual and relational aspects of natural resources, even if these perspectives are not directly related to the Western conservation paradigm. By legitimizing and integrating Lakota perspectives, we believe that there will be greater support for any conservation program implemented at Pine Ridge, and potentially greater personal motivations towards conservation

behaviors in the society at large. In terms of formal economics, there should be a vibrant economy on Pine Ridge given the once vast natural resources. What accounts for poverty and inaccessibility of land and resources? The structural barriers discussed above are removing the individual from the means of self-sufficiency, and perpetuating this via promotion of individuality. Thus the individual often cannot see past the structural barrier to understand the problem, and conversely the structural elements do not make the effort to accommodate the grassroots layer.

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