The Community of Member-Based Nature Parks:

An Integration of Spatial, Demographic, and Interview Data

J. Nichole McNiel

Thesis Proposal

Fall 2010

**Introduction**

“In Wilderness is the preservation of the World.”

* Henry David Thoreau (1937: 672)

Since initial European settlement in the United States, American ideology hasbeen marked by its social construction of the biophysical world. From the civil war through present times, a conceptual and political discourse has rendered nature a categorical ideal, comprised of many different American sentiments. Nature is often framed as a grand, open space, representing the limitless possibilities of the American people and, within this context, America has undertaken the creation of national parks and sanctuaries in order to preserve this ideal. Nature, set apart in the form of parks, has become an American cultural symbol; an archetype of normative cultural values that embody the greatness of the nation and its people (Ross-Bryant 2005). This concept of wilderness places a great emphasis on nature’s transcendent quality. Thus, embedded within the ideology of preserving nature by creating parks is the social construction of nature.

In recent years, member-based nature centers have been established to provide both community orientation to nature and education services oftentimes with the goal of promoting nature conservancy and growth. These centers also allow visitors to participate in outdoor recreation and nature experience for a fee. Thus, people who wish to visit nature centers can either pay fees to become members or a daily entrance fee. However, little research has focused on this segment of nature use. Research on parks and park use commonly focuses upon the perceived physical and psychological benefits of and constraints to outdoor recreation at the national and public park level. This research suggests that while the idea that public parks belong to all Americans is promulgated, the presence of distinct use patterns provides evidence that participation is stratified among different segments of society and that use occurs for different reasons. In that vein, a number of studies have examined the relationship between park users and constraints to park use (Arnold and Shinew 1998; Bialeschki and Henderson 1998; Howard and Crompton 1984; Johnson, Bowker, and Cordell 2001; Lee, Scott, and Floyd 2001; Mowen and Confer 2003; Payne, Mowen, and Orsega-Smith 2002; Scott and Jackson 1996; Shores, Scott, and Floyd 2007). Such findings represent the presence of a troubling inequality among park users and non-users along gender, socio-economic status, and racial lines (Arnold and Shinew 1998; Johnson et al. 2001; Lee et al. 2001; Scott and Jackson 1996; Shores et al. 2007; Virden and Walker 1999). Previous research indicates that other constraints, such as distance to a park, are also factors (Bialeschki and Henderson 1998; Giles-Corti, Broomhall, Knuiman, Collins, Douglas, Ng, Lange, and Donovan 2005; Howard and Crompton 1984; Mowen and Confer 2003).

Until now, research has virtually neglected member-based nature parks for analysis, even though findings suggest park programs, funds, and policies may not be adequately utilized because they are not reaching certain segments of a community. Given available research, this paper suggests that these types of member-based nature parks may only be serving a particular spatial and socio-demographic segment of a community and, therefore, may not be reaching maximum effectiveness if an entire community, or a significant subgroup within that community, is unable to reap the physical, psychological, or other perceived benefits from nature center use. This gap within the literature also extends to environmental sociology, as an analysis of member-based nature participation from an environmental sociological perspective has yet to be included in environmental inequality inquiry. Thus far, environmental inequality research has long sought to empirically study the claims that environmental degradation affects the poor and people of color disproportionately. Studies on the topic repeatedly point to clear evidence of disproportionate siting of environmental hazards (Apelberg, Buckley, and White 2005; Brulle and Pellow 2006; Downey 2005a, 2005b; Downey and Hawkins 2008; Hooks and Smith 2004; Pastor, Morello-Frosch, and Sadd 2005; Pellow 2004; Pulido 2000; Saha and Mohai 2005; Smith 2007; Smith 2009; Walker, Mitchell, Fairburn, and Smith 2005). However, this research proposes that environmental inequality also manifests itself in the disproportionate access to environmental benefits.

According to Wicks, Backman, Allen, and Blaricom (1993), to accurately assess community parks in relation to use and users, a study must include spatial variables, demographic data of residents, and attitudinal data of residents who use the park. To that end, this thesis empirically explores the environmental inequality of participation in member-based nature parks in two ways. First, community users are assessed through analysis of integrated spatial and demographic information of member zip codes gathered from a nature center in Texas. Second, member views of how nature is socially constructed as it relates to park use, are ascertained through interviews collected from a sample of the nature centermembers.

**National Park Background**

Parks represent an array of American sentiments. Throughout history, American social constructions of nature have been associated with religion, utility, and romanticism. Until the nineteenth century, wilderness was the place at the edge of civilization where it was “all too easy to lose oneself in moral confusion and despair” (Cronon 1995: 70). However, by the late 1800s, nature had come to been seen as Eden, a place given to Americans by God himself (Cronon 1995; Ross-Bryant 2005). Since then, wilderness has served social functions that range from ties to the country’s romantic mythological past and places of great beauty to a fundamental part of American citizenry and social identity (Borrie, Freimund, and Davenport 2002; Cox 1985; Cronon 1995; Delaney 2001; Miller 1992; Ross-Bryant 2005; Route 1987; White, Virden, and Cahill 2005).

In the 1920’s, Aldo Leopold (1925) described wilderness as a “means for allowing the more virile and primitive forms of outdoor recreation to survive” (401). Like many of his contemporaries, Leopold envisioned wilderness as refuge from modernity, where outdoor experiences would reconnect people to the land. From the onset of park establishment, there existed an idealized view of the ‘purity of wilderness.’ That is to say, that the essential beauty of wilderness needed to be preserved for posterity (Borrie et al. 2002; Cox 1985; Cronon 1995; Miller 1992; Orloff 2004; Raymond and Brown 2006; Ross-Bryant 2005).

Niagara Falls was the first to undergo the transformation from ‘wild-land’ to a place whose beauty was “so spectacular that American citizens had to visit it and see for themselves,” and the Catskills and the Adirondacks soon followed (Cronon 1995: 3). The first lands granted by the federal government to be set-aside as national parks were Yosemite and Yellowstone (Borrie et al. 2002; Ross-Bryant 2005). In 1864 the United States government deeded Yosemite to the state of California as the nation’s first wild land park after its discovery in 1851 by a group of volunteer militia when they drove out to capture the Ahwahneechee American Indians who had been living in the area (Ross-Bryant 2005). National parks, as they are recognized today, were not a part of American culture until 1872 when the United States Congress set aside 2 million acres of land to make Yellowstone “a public park or pleasuring ground for the benefit and enjoyment of the people” (United States Congress 1872).

In 1916, the National Park Service was established through the Organic Act (Borrie et al. 2002; Ross-Bryant 2005) and, with this action, the justification behind park establishment became confounded by various, perhaps incongruous, rationales. On one side, a utilitarian argument emphasized the necessity of parks for their rejuvenating power, as essential to the productivity and well being of American workers (Ross-Bryant 2005). Supporters of this view argued before Congress that the continued progress (i.e. Manifest Destiny) of the nation depended on Americans being renewed in the wild. On the other side, the economic value of parks was simple: the more visitors a park received, the more funding from the government (Ross-Bryant 2005).

By the 1950sthe advent of the federal highway, networks of logging roads, and new technology and information made it easier for Americans to have access of, and plan trips to wilderness. During the 1950s to 1970s, the environmental movement was taking shape, which led to an increase in encouragement for the recreational uses of nature (Glotfelty 1996; Turner 2002). Following the passage of the Wilderness Act in 1964, and as wilderness popularity grew, wilderness land for recreation and wilderness land for preservation emerged as the two dominant views (Turner 2002).

After this, wilderness was taken out of the realm of the biophysical and reified to become an ‘experience.’ Travel to the park became a popular way to enjoy an individualistic exploration of wilderness while maintaining membership within the American community (Ferriss 1970; Miller 1992; Ross-Bryant 2005; Trachtenberg 1968; White, Virden, and Cahill 2005).

With the rise in park popularity, activities such as hiking grew at rates five times that of the population (Glotfelty 1996: 439) and research highlighted the benefits associated with nature activities. Such studies have found wilderness benefits to be related to an individual’s well-being both physically (Bedimo-Rung, Mowen, and Cohen 2005; Cohen, McKenzie, Sehgal, Williamson, Golinelli, and Lurie 2007; Payne, Orsega-Smith, Roy, and Godbey 2005) and psychologically (Manning and Moore 2002; Stein and Lee 1995; Williams and Carr 1993). Frequently addressed are the physical benefits of reduced risk of cardiovascular disease and obesity, healthier immune system, and increased life expectancy (Bedimo-Rung et al. 2005; Cohen et al. 2007; Maller, Townsend, Pryor, Brown and St. Leger 2005; Vries, Verheij, Groenewegen and Spreeuwenberg 2003). Psychological benefits include reduced depression, stress-relief, higher self-esteem, and life satisfaction (Kleiber, Hutchinson and Williams 2002; Maller et al. 2005; Manning and Moore 2002; Orsega-Smith et al. 2004; Stein and Lee 1995; Williams and Carr 1993). Additionally, some research indicates perceived spiritual benefits which are often associated with a sense of holism, transcendence, connectedness with the earth, and being closer to God or a divine power (Farber, Costanza and Wilson 2002; Fine and Sandstrom 2005; Maller et al. 2005; Manning and Moore 2002; Stein and Lee 1995).

Growth in wilderness recreation also came to be viewed as the by-product of the consumer culture’s ability to “[refashion] ‘wilderness’ as an accessible and desirable tourist destination” (Turner 2002: 463). By the 1970s one no longer needed expert knowledge of nature to participate in the wilderness experience and wilderness recreation commanded a $400 million dollar market. The wilderness experience became dependent on advanced consumer technology: sleeping bags and tents replaced make-shift shelters, clothing designed specifically for outdoor activities replaced fur from animals, and the well-equipped backpack became a staple (Turner 2002). Visits to nature, with all the conveniences of modern civilization in tow, became embedded within larger economic experiences of consumption and production as a leisure activity (Cronon 1995; Hirschman 2003; Taylor 2000; Turner 2002; West 1996).

While it is evident that park creation and use is intertwined with larger American social concepts of nature, this relationship is of particular importance within environmental sociology (Catton and Dunlap 1978; Dunlap and Marshall 2007; Hannigan 1995; Jones 2002). Two questions are crucial to the study of social-ecological relationship for sociologists: 1) What is nature (the environment)?; 2)What is nature’s relationship to society? With these questions sociologists begin to explicate or identify the various ways in which society’s relationship with the environment manifests itself. Moreover, it is from this elucidation of the different manifestations that sociologists derive theories about the empirical social-nature relationship and create methodological frameworks for studying them.

There are two opposing theoretical perspectives utilized by environmental sociologists to answer these questions. First, is the social construction of nature or constructivist view; second is the positivist, or realist, view (Jones 2002). The constructivist paradigm stems from the epistemological school of philosophy- phenomenology. Constructivists argue that there is no one single nature itself, but many socially constructed ideas of ‘nature’ (Dunlap and Marshall 2007). The positivist side argues that society is quantifiable and examinable because humans and nature exist independent of one another (Rosa 1998). With its origins in ontology, this fundamentally scientific outlook, understands the social world as objective, and calls for social researchers to be as objective as possible. As realists argue, the biophysical world is comprised of real entities not merely socially constructed ones (Dunlap and Marshall 2007). The realist and constructivist views are part of a controversial and difficult debate within environmental sociology.

On the one hand, an extreme constructionist view of nature is problematic because it assumes nature is completely socially constructed. That is to say, nature can never be ‘real’ because it is merely a social construction and is therefore malleable, changing according to society’s view of it. For example, Ross-Bryant (2005) argues that the ‘socially-constructed’ park reflects the prevailing “collective ideals” of a given time-period. On the other hand, to view nature from an extreme realist perspective is reductionist because it minimizes the important relationship and interactions between culture, society, and nature. Therefore, a critical environmental sociology perspective is needed to further evaluate outdoor recreation from a middle-ground perspective that neither reduces nature to an abstracted, constructed reality nor a completely scientific one. To address this, a component of this thesis attempts to present a nuanced view of the social construction of nature as it relates to park participation.

**Leisure Research Literature**

There is a wide range of literature covering issues related to park participation and participation intensity (Borrie et al. 2002; Bowker, Cordell, and Johnson 1999; Hammitt, Bixler, and Noe 1996; Hollenhorst, Olson, and Fortney 1992; White et al. 2005) that forms a particularly important aspect of leisure research. Findings from leisure research, have noted different constraints for park participation and participation intensity. This research on constraints often cites the presence of distinct inequalities between park users and non-users (Arnold and Shinew 1998; Bialeschki and Henderson 1998; Howard and Crompton 1984; Johnson et al. 2001; Lee et al. 2001; Mowen and Confer 2003; Payne, Mowen, and Orsega-Smith 2002; Scott and Jackson 1996; Shores et al. 2007). For example, Bialeschki and Henderson (1998) noted that trail users could easily be distinguished from non-users by their age, income, and gender. They also found that time, lack of information, money, health, and distance from home were the leading barriers for trail use. Likewise, Scott and Jackson (1996) revealed that the most intense and widespread types of constraints were associated with availability of time. They also found that improved programming of park activities and park promotions within a community were the most effective strategies to encourage park use.

Participation inequality has also been identified among distinct demographic groups based on race (Arnold and Shinew 1998; Floyd 1999; Johnson et al. 2001; Lee et al. 2001; Martin 2004; Shores et al. 2007; Virden and Walker 1999; Walker, Deng, and Dieser 2001), socioeconomic status (Arnold and Shinew 1998; Cordell, Green, and Betz 2002; Lee et. al 2001; Shores et. al 2007), and gender (Arnold and Shinew 1998; Johnson et. al 2001; Lee et. al 2001; Shores et. al 2007; Virden and Walker 1999). Racial and ethnic minorities tend to experience constraints more often than non-minorities (Shores et al. 2007). For example, blacks are less likely than whites to travel to recreation areas, and generally have less involvement in outdoor recreation than whites (Johnson et al. 2001). Using marginality theory, research attributes racial differences to structural barriers within society, such as transportation or information about facilities, which prevent some racial minorities from participating in these activities (Johnson et al. 2001; Lee et al. 2001).

Recently, research indicates that participation rates may also be explained by cultural differences (Buijs, Elands, and Langers 2009; Kaplan and Talbot 1988), discrimination (Blahna and Black 1993), and social views on appropriate racial leisure activities (Phillip 1999). According to these explanations, recreation is impaired by additional factors other than frequently documented constraints. Gobster (2002) found that Hispanics are limited in their recreation use because they tend to recreate in larger groups, and current park facility designs are not well-suited for such group sizes. Similarly, Muslim-Americans are limited because facilities are not conducive to the spaces they require for daily prayers and communal meetings (Stodolska and Livengood 2003). The appeal of activities significantly differs by race, such that African-Americans report feeling less comfortable and unwelcome in activities perceived as primarily “white” (Shores et al.). Moreover, minority races often experience feelings of discrimination in their outdoor recreation participation. For example, Blahna and Black (1993) identified four specific forms of discrimination experienced by Hispanic and African-American students in Chicago parks and wilderness areas.

Studies have also found constraints preventing women from successful involvement in leisure recreation and outdoor activities. Findings indicate that women are often constrained in their park use because of gender role socialization. Within this research fears of crime and violence are often found to be significant factors (Arnold and Shinew 1998; Bialeschki 2005; Coble, Selin, and Erickson 2003; Day 2001; Henderson and Bialeschki 1993; Koskela 1999; Manning, Bacon, Graefe, Kyle, Lee, and Burns 2001; Wesely and Gaarder 2004). In a recent study, Day (2001) tied fear to the construction of masculine and feminine gender identities. Her findings reveal that the spatial construction of masculine identities builds upon perceptions of feminine identities, especially those of women as “fearful” and “endangered” in given places (Day 2001). Other constraints include the perception of outdoors as dangerous places (Filemyr 1997), a caretaker ethic (Wearing and Wearing 1988), a perceived lack of skill, self-confidence, feminine body-image (Frederick and Shaw 1995), and a perceived lack of entitlement due to views of outdoor recreation as being primarily male-dominated territory (Green, Hebron, and Woodward 1990; Henderson and Bialeschki 1991; Virden and Walker 1999; Wearing and Wearing 1988).

An individual’s level of income, level of education, and occupational status also has considerable influence on park use (Arnold and Shinew 1998; Burdge 1969; Kelly 1996; Lee et al. 2001; Scott and Munson 1994; Shores et al. 2007). For example, Scott and Munson (1994) observed that individuals with low incomes experienced far more constraints to park use than individuals with high incomes. Likewise, Kelly (1996) notes that a low income keeps individuals from being able to participate in some kinds of outdoor recreation simply because they are unable to allocate the necessary financial resources. Burdge (1969) notes that the relationship between occupational status and park use is especially prominent in activities that are closely tied to social status and which require some resources, either financial or cultural.

Explanations for the relationship between socio-economic status variables and leisure participation have tended to focus on opportunity theory. This perspective suggests that outdoor recreation participation rates are directly related to the cost and physical availability of recreation resources (Lee et al. 2001). Thus, income or occupation limits a person’s opportunity to participate in some types of leisure due to travel costs, entrance fees, and other participation costs. Likewise, education is related to leisure socialization, developing an interest in certain types of leisure, and knowledge of the skills needed to participate (Lee et al. 2001).

Up until now, much research has focused upon park participation, participation intensity, and leisure constraints from leisure research perspectives. The social fact of the national parkis integrated into the fabric of social structure, organization, socialization, and culture. Although the establishment of member-based nature centersis most likely intertwined with the same ideologies of those that led to the creation of public parks to preserve nature and provide a place for all people to interact with nature, little attention has been given to them within environmental sociology research.

Sociology has been concerned with questions related to the micro- and macro- levels of social relationships focusing on the results of human interactions on society. Thus, an evaluation of the limitations and validity of literature dealing with the environmental-social interaction, the social construction of nature and the creation of national and local member-based parks is needed to highlight their intersections.

This paper attempts to suggest answers to the following questions: how does our society view ‘wilderness’ this way? Moreover, are there particular ways in which the commodification of nature impacts society? By exploring the environmental sociology of outdoor activities, particularly park use, it is evident the answers can take several directions. The consensus among some scholars is that nature is socially constructed for various utilitarian, economic, cultural, and pre-lapsarian or romantic reasons, and that such views change according to the dominant ideology of the time. However, this paper notes the problems of a sole reliance on the social construction view of nature and calls for a theoretical re-framing of the biophysical world inclusive of both constructivism and realism. This paper also proposes that the commodification of nature through the creation of parks is problematic because of its impacts on society, particularly through inequality and stratification.

In this regard, research has yet to undertake an evaluation of the presence of distinct demographic inequalities between nature park members and the larger community. This thesis suggests member-based nature centers may not be benefiting all community residents, given leisure constraints. It stands to reason that socio-demographic disparities of participation may be present in areas of member-based nature centers due to their inclusive nature (i.e. location and fees for participation). The possible presence of these inequalities denotes an unsettling outcome that certain geographic segments of a community are not receiving benefits from this type of outdoor participation. Additionally, because many of these smaller member-based nature parks receive funding from national, state, and/or local government agencies, some nature recreation programs, funds, and policies may not be reaching their maximum effectiveness.

Such inequality points to a larger issue within environmental sociology, that of environmental inequality. Even though member-based nature centers do not inflict hazards, their disproportionate access is potentially an environmental benefit that is unequally distributed to some parts of a population. Therefore, environmental inequality may be present due to the unequal access of nature benefits derived from member-based nature centers.

**Data and Methods**

This study utilizes both qualitative and quantitative analyses to address the following research questions:

1. How many people are members of this nature center, and which community members does this member-based park serve?
2. How is nature socially constructed as it relates to park use?

*Quantitative Analysis:*

To answer the first research question, quantitative methods are used. The research hypothesis was that there are disparities between areas where members live within the community when compared to the surrounding metro population. That is to say, I expect that members will tend to live closer to the center and in parts of the community that are homogeneous as compared to the larger surrounding city.

The units of measurement for this study are all at the aggregate level of the zip code. Geographic information, provided by a nature center in Texas, identifies members’ zip codes. Using Geographic Information Systems (GIS), zip code information is compiled with demographic information gathered from the U.S. Bureau of the Census’s Topologically Integrated Geographic Encoding and Referencing System (TIGER). Not only is GIS a valuable tool in recreation and park service research, but also this type of GIS analysis is beneficial because it allows for the ability to manipulate complex data sets (Wicks et al. 1993). Census data was gathered for each member zip code to evaluate the socio-demographic nature of the center’s user community. This data includes median income, housing values, level of education, number of single-parent households, percent below poverty, and race percentages for all member zip codes, as well as those within the surrounding larger metro-area in Central Texas. These variables were chosen because they are common indicators of socio-economic and racial demographics of a population, and because they allow for conclusions about the socio-demographic nature of that population.

Once integrated, this data is explored through spatial analysis to determine where the largest amounts of members reside and what specific community markers, if any, are present. This enables this study to draw conclusions about the spatial distribution of nature center members and the community in which they live. Thus, I can reasonably find any demographic disparities between nature center members as compared to the rest of the metro-area population. The spatial distribution of members in relation to the rest of the metro-area community may also illustrate the unequal distribution of membership in this environmental benefit (i.e. benefits derived from nature participation). However, due to the limited nature of the data, I cannot draw any definitive conclusions as to the characteristics of nature center members, rather only the community characteristics of those members served by the nature center.

*Qualitative Analysis:*

In answering the second research question, the goal of this component was to explore how nature is constructed and how this relates to a member’s use of nature. I seek to understand the relationship between the social construct and park use because it relates to the need for the member-based nature center which in turn influences the center’s relative placement, function, and role in a community. Additionally, I want to address the paucity of research that evaluates outdoor recreation from a middle-ground perspective. Wicks et al. (1993) suggests that to accurately assess community parks in relation to use and users, a study must include spatial variables, demographic data of residents, and attitudinal data of residents who use the park. I aim to avoid reducing nature to an abstracted reality that views park use as always changing (Borrie et al. 2002; Ross-Bryant 2005) or to study nature use as completely scientific. Therefore, I will highlight the construction of nature as it relates to park use and combine this with numerical data on membership in the nature center community.

To this end, in-depth interviews are conducted with members who responded to the author’s request for participants published in the nature center’s member newsletter. Because this is convenient sampling and participants only consisted of those members who chose to participate in an interview, qualitative findings of this study are limited in scope and not generalizable to the larger population.

**References**

Apelberg, Benjamin J., Timothy J. Buckley, and Ronald H. White. 2005. “Socioeconomic and Racial Disparities in Cancer Risk from Air Toxics in Maryland.” *Environmental Health Perspectives.* 113:693-699.

Arnold, Margaret L. and Kimberly J. Shinew. 1998. “The Role of Gender, Race, and Income on Park Use Constraints.” *Journal of Park and Recreation Administration* 16:39-56.

Bedimo-Rung, Ariane, Andrew Mowen, and Deborah Cohen. 2005. “The Significance of Parks to Physical Activity and Public Health.” *American Journal of Preventative Medicine* 28:159-168.

Bialeschki, Deborah. 2005. “Fear of Violence: Contested Constraints by Women in Outdoor Recreation Activities.” Pp. 103-114 in E.L. Jackson (Ed.), *Constraints to Leisure*. State College, PA:Venture Publishing.

Bialeschki, Deborah and Karla Henderson. 1998. “Constraints to Trail Use.” *Journal of Park and Recreation Management* 6:20-28.

Blahna, Dale and K. Black. 1993. “Racism: Is it a Concern for Recreation Resource Managers?” Pp. 111-118 in P. Gobster (Ed.), *Managing Recreation in Urban and High Use Settings*. NC:USDA Forest Service North.

Borrie, William T., Wayne A. Freimund, and Mae A. Davenport. 2002. “Winter Visitors to Yellowstone National Park: Their Value Orientations and Support for Management Actions.” *Human Ecology Review* 9:41-48.

Bowker, J. M., H. K. Cordell, and Cassandra Y. Johnson. 1999. “User Fees for Recreation Services on Public Lands: A National Assessment.” *Journal of Park and Recreation Administration* 17:1-14.

Brulle, Robert J. and David N. Pellow. 2006. “Environmental Justice: Human Health and Environmental Inequalities.” *Annual Review of Public Health.* 27:103-124.

Buijs, Arjen E., Birgit H.M. Elands, and Fransje Langers. 2009. “No Wilderness For Immigrants: Cultural Differences in Images of Nature and Landscape Preferences.” *Landscape and Urban Planning* 91:113-123.

Burdge, R. 1969. “Levels of Occupational Prestige and Leisure Activity. *Journal of Leisure Research* 1:262-274.

Catton, William R., Jr. and Riley E. Dunlap. 1978. “Environmental Sociology: A New Paradigm.” *The American Sociologist*. 13: 41-49.

Coble, Theresa, Steve Selin, and Beth Erickson. 2003. “Hiking Alone: Understanding Fear, Negotiation Strategies, and Leisure Experience.” *Journal of Leisure Research* 35:1-22.

Cohen, Deborah, Thomas L. McKenzie, Amber Sehgal, Stephanie Williamson, Daniela Golinelli, and Nicole Lurie. 2007. “Contribution of Public Parks to Physical Activity.” *American Journal of Public Health* 97:509-514.

Cordell, Ken, Gary Green, and Carter Betz. 2002. “Recreation and the Environment as Cultural Dimensions in Contemporary American Society.” *Leisure Sciences* 24:13-41.

Cox, Thomas R. 1985. “Americans and Their Forests: Romanticism, Progress, and Science in the Late Nineteenth Century.” *Journal of Forest History* 29:156-168.

Cronon, William. 1995. “The Trouble With Wilderness; Or, Getting Back to the Wrong Nature.” Pp. 69-90 in *Uncommon Ground: Rethinking the Human Place in Nature*, edited by W. Cronon. New York: W. W. Norton & Co.

Day, Kristen. 2001. “Constructing Masculinity and Women's Fear in Public Space in Irvine, California.” *Gender, Place, & Culture* 8:109-127.

Delaney, David. 2001. “Making Nature/Marking Humans: Law as a Site of (Cultural) Production.” *Annals of the Association of American Geographers*. 91:487-503.

Downey, Liam. 2005a. “The Unintended Significance of Race: Environmental Inequality in Detroit.” *Social Forces* 83:971-1008.

Downey, Liam. 2005b. “Single Mother Families and Industrial Pollution in Industrial America.” *Sociological Spectrum.* 25:651-675.

Downey, Liam and Brian Hawkins. 2008. “Race, Income, and Environmental Inequality in the United States.” *Sociological Perspectives.* 51:759-781.

Dunlap, Riley and Brent K. Marshall. 2007. “Environmental Sociology.” Pp. 329-340 in Clifton D. Bryant and Dennis L. Peck (eds.). *21st Century Sociology: A Reference Handbook*. Vol 2. Thousand Oaks, CA: Sage Publications.

Farber, Stephen, Robert Costanza, and Matthew Wilson. 2002. “Economic and Ecological Concepts for Valuing Ecosystem Services.” *Ecological Economics* 41:375-392.

Ferriss, Abbott L. 1970. “The Social and Personality Correlates of Outdoor Recreation.” *Annals of the American Academy of Political and Social Science* 389:46-55.

Filemyr, Ann. 1997. “Going Outdoors and Other Dangerous Expeditions.” *Frontiers: A Journal of Women’s Studies* 18:160-177.

Fine, Gary A. and Kent L. Sandstrom. 2005. “Wild Thoughts: An Interactionist Analysis of Ideology, Emotion, and Nature.” Pp. 249-270 in *Illuminating Social Life: Classical and Contemporary Revisited*, edited by Peter Kivisto. Thousand Oaks, CA: Sage Publications.

Floyd, Myron. 1999. “Race, Ethnicity and Use of the National Park System.” *National Park Service Social Science Research Review* 1:1-24.

Frederick, Jody and Susan Shaw. 1995. “Body Image as a Leisure Constraint: Examining the Experience of Aerobic Exercise Classes for Young Women.” *Leisure Sciences* 17:57-73.

xsGiles-Corti, Billie, Melissa H. Broomhall, Matthew Knuiman, Catherine Collins,

Kate Douglas, Kevin Ng, Andrea Lange, Robert J. Donovan. 2005. “Increasing Walking How Important Is Distance To, Attractiveness, and Size of Public Open Space?” *American Journal of Preventive Medicine* 28:169-175.

Gobster, Paul. 2002. “Managing Urban Parks for a Racially and Ethnically Diverse Clientele.” *Leisure Sciences* 24:143-159.

Glotfelty, Cheryll. 1996. “Feminity in the Wilderness: Reading Gender in Women’s Guides to Backpacking.” *Women’s Studies* 25:439-456.

Green, Eileen, Sandra Herron, and Diana Woodward. 1990. *Women’s Leisure, What Leisure?* London:McMillian.

Hammitt, William E., Robert D. Bixler, and Francis P. Noe. 1996. “Going Beyond Importance-Performance Analysis to Analyze the Observance-Influence of Park Impacts.” *Journal of Park and Recreation Administration* 14:45-62.

Hannigan, John. 1995. *Environmental Sociology: A Social Constructivist Perspective*. New York, NY: Routledge.

Henderson, Karla and Deborah Bialeschki. 1991. “A Sense of Entitlement to Leisure as Constraint and Empowerment for Women.” *Leisure Sciences* 12:51-65.

Henderson, Karla and Deborah Bialeschki. 1993. “Fear as a Constraint to Active Lifestyles for Females.” *Journal of Physical Education, Recreation, and Dance* 64:44-47.

Hirschman, Elizabeth C. 2003. “Men, Dogs, Guns, and Cars: The Semiotics of Rugged Individualism.” *Journal of Advertising* 32:9-22.

Hollenhorst, Steve, David Olson, and Ronal Fortney. 1992. “Use of Importance-Performance Analysis to Evaluate State Park Cabins: The Case of the West Virginia State Park System.” *Journal of Park and Recreation Administration* 10:1-11.

Hooks, Gregory and Chad L. Smith. 2004. “The Treadmill of Destruction: National Sacrifice Areas and Native Americans.” *American Sociological Review* 69:558-575.

Howard, Dennis R. and John L. Crompton. 1984. “Who are the Consumers of Public Park and Recreation Services? An Analysis of the Users and Non-Users of Three Municipal Leisure Service Organizations.” *Journal of Park and Recreation Administration* 2:33-48.

Johnson, Cassandra Y., J. M. Bowker, and Ken Cordell. 2001. “Outdoor Recreation Constraints: An Examination of Race, Gender, and Rural Dwellings.” *Southern Rural Sociology* 17:111-133.

Jones, Samantha. 2002. “Social Constructionism and the Environment: Through the Quagmire.” *Global Environmental Change* 12:247-251.

Kaplan, Rachel and J. F. Talbot. 1988. “Ethnicity and Preference For Natural Settings: A

Review and Recent Findings.” *Landscape and Urban Planning* 15:107-117.

Kelly, John. 1996. *Leisure* (3rd edition). Englewood Cliffs, NJ: Prentice Hall.

Kleiber, Douglas, Susan L. Hutchinson, and Richard Williams. 2002. “Leisure as a Resource in Transcending Negative Life Events: Self-Protection, Self-Restoration, and Personal Transformation.” *Leisure Sciences* 24:219-235.

Koskela, Hille. 1999. “ ‘Gendered Exclusions’: Women’s Fear of Violence and Changing Relations to Space.” *Geografiska Annaler* 81:111-124.

Lee, Jin-Hyung, David Scott, and Myron Floyd. 2001. “Structural Inequalities in Outdoor Recreation Participation: A Multiple Hierarchy Stratification Perspective.” *Journal of Leisure Research* 33:427-449.

Leopold, Aldo. 1925. “Wilderness as a Form of Land Use.” *Journal of Land and Public Utility Economics* 1:398-404.

Maller, Cecily, Mardie Townsend, Anita Pryor, Peter Brown and Lawrence St. Leger. 2005. “Healthy Nature Healthy People: ‘Contact with Nature’ as an Upstream Health Promotion Intervention for Populations.” *Health Promotion International* 21:45-54.

Manning, Robert, J. Bacon, A. Graefe, G. Kyle, R. Lee and R. Burns. 2001. “ ‘I Never Hike Alone’: Security on the Appilachian Trail.” *Parks & Recreation* 36:50-57.

Manning, Robert and Thomas Moore. 2002. “Recreational Values of Public Parks.” *The George Wright FORUM* 19:21-30.

Martin, Derek Christopher. 2004. “Apartheid in the Great Outdoors: American Advertising and the Reproduction of a Radicalized Outdoor Leisure Identity.” *Journal of Leisure Research* 36:513-535.

Miller, Angela. 1992. “Everywhere and Nowhere: The Making of the National Landscape.” *American Literary History* 4:207-229.

Mowen, Andrew and John J. Confer. 2003. “The Relationship Between Perceptions, Distance, and Socio-Demographic Characteristics Upon Public Use of An Urban Park ‘In-Fill’.” *Journal of Park and Recreation Administration* 21:58-74.

Orloff, Chet. 2004. “Maintaining Eden: John Charles Olmsted and the Portland Park System.” *Yearbook of the Association of Pacific Coast Geographers* 66:114-119.

Pastor, Manuel Jr., Rachel Morello-Frosch, and James L. Sadd. 2005. “The Air is Always Cleaner on the Other Side: Race, Space, and Ambient Air Toxics Exposures in California.” *Journal of Urban Affairs*. 27:127-148.

Payne, Laura L., Elizabeth Orsega-Smith, Mark Roy, and Geoffrey C. Godbey. 2005. “Local Park Use and Personal Health Among Older Adults: An Exploratory Study.” *Journal of Park and Recreation Administration* 23:1-20.

Payne, Laura L., Andrew J. Mowen, and Elizabeth Orsega-Smith. 2002. “An Examination of Park Preferences and Behaviors Among Urban Residents: The Role of Residential Location, Race, and Age.” *Leisure Sciences* 24:181-198.

Pellow, David N. 2004. “The Politics of Illegal Dumping: An Environmental Justice Framework.” *Qualitative Sociology.* 27:511-525.

Phillip, Steven. 1999. “Are We Welcome? African-American Racial Acceptance in Leisure Activities and The Importance Given to Children’s Leisure.” *Journal of Leisure Research* 31:385-403.

Pulido, Laura. 2000. “Rethinking Environmental Racism: White Privilege and Urban Development in Southern California.” *Annals of the Association of American Geographers.* 90:12-40.

Raymond, Christopher and Gregory Brown. 2006. “A Method for Assessing Protected Area Allocations Using a Typology of Landscape Values.” *Journal of Environmental Planning and Management* 49:797-812.

Rosa, Eugene A. 1998. “Metatheoretical Foundations for Post-Normal Risk.” *Journal of Risk Research*. 1: 15-44.

Ross-Bryant, Lynn. 2005. “Sacred Sites: Nature and Nation in the U.S. National Parks.” *Religion and American Culture: A Journal of Interpretation* 15:31-62.

Route, Alfred. 1987. *National Parks: The American Experience, 2nd Edition*. Lincoln: University of Nebraska Press.

Saha, Robin and Paul Mohai. 2005. “Historical Context and Hazardous Waste Facility Siting: Understanding Temporal Patterns in Michigan.” *Social Problems.* 52:618-648.

Scott, David and Edgar Jackson. 1996. “Factors that Limit and Strategies that Might Encourage People’s Use of Public Parks.” *Journal of Park and Recreation Administration* 14:1-17.

Scott, David and Wayne Munson. 1994. “Perceived Constraints on Park Usage Among Individuals with Low Incomes.” *Journal of Park and Recreation Administration* 12:79-96.

Shores, Kindal A., David Scott, and Myron F. Floyd. 2007. “Constraints to Outdoor Recreation: A Multiple Hierarchy Stratification Perspective.” *Leisure Sciences* 29:227-246.

Smith, Chad L. 2007. “Economic Deprivation and Environmental Inequality in Post-Industrial Detroit: A Comparison of Landfill and Superfund Site Locations.” *Organization and Environment* 20:25-43.

Smith, Chad L. 2009. “Economic Deprivation and Racial Segregation: Comparing Superfund Sites in Portland, Oregon and Detroit, Michigan.” *Social Science Research.* 38:681-692.

Stein, Taylor and Martha Lee. 1995. “Managing Recreation Resources for Positive Outcomes: An Application of Benefits-Based Management.” *Journal of Park and Recreation Administration* 13:52-70.

Stodolska, Monika and Jennifer Livengood. 2006. “The Influence of Religion on the Leisure Behavior of Immigrant Muslims in the United States.” *Journal of Leisure Research* 38:293-320.

Taylor, Dorceta E. 2000. “Meeting the Challenge of Wild Land Recreation Management: Demographic Shifts and Social Inequality.” *Journal of Leisure Research* 32:171-179.

Thoreau, Henry David. 1937. “Walking.” Pp. 672 in *The Works of Thoreau*, edited by Henry S. Canby. Massachusetts: Houghton Mifflin.

Trachtenberg, Stanley. 1968. “American Dreams, American Realities.” *The Antioch Review* 28:277-292.

Turner, James M. 2002. “From Woodcraft to ‘Leave No Trace’: Wilderness, Consumerism, and Environmentalism in Twentieth-Century America.” *Environmental History* 7:462-484.

United States Congress. 1872. *Yellowstone Act.*

Virden, Randy and Gordon Walker. 1999. “Ethnic/Racial and Gender Variations Among Meanings Given to, and Preferences for, the Natural Environment.” Leisure Sciences 21:219-239.

Vries, Sjerp de, Robert Verheij, Peter Groenewegen, and Peter Spreeuwenberg. 2003. “Natural Environments- Healthy Environments? An Exploratory Analysis of the Relationship Between Greenspace and Health.” *Environment and Planning* 35:1717-1731.

Walker, Gordon, Gordon Mitchell, John Fairburn, and Graham Smith. 2005. “Industrial Pollution and Social Deprivation: Evidence and Complexity in Evaluating and Responding to Environmental Inequality.” *Local Environment.* 10:361-377.

Walker, Gordon, Jinyang Deng, and Rodney Dieser. 2001. “Ethnicity, Acculturation, Self-Construal and Motivations for Outdoor Recreation.” *Leisure Sciences* 23:263-283.

Wearing, Betsy and Stephen Wearing. 1988. “ 'All In A Day's Leisure': Gender and the Concept of Leisure.” *Leisure Studies* 7:111-123.

Wesely, Jennifer K. and Emily Gaarder. 2004. “The Gendered “Nature” of the Urban Outdoors: Women Negotiating the Fear of Violence.” *Gender & Society* 18:645-663.

West, Elliott. 1996. “Selling the Myth: Western Images in Advertising.” *Montana: The Magazine of Western History* 46:36-49.

White, Dave D., Randy J. Virden, and Kerri L. Cahill. 2005. “Visitor Experiences in National Park Service Cultural Sites in Arizona: Implications for Interpretive Planning and Management.” *Journal of Park and Recreation Administration* 23:63-81.

Wicks, Bruce E., Kenneth F. Backman, Jeffery Allen, and Donald Van Blaricom. 1993. “Geographic Information Systems (GIS): A Tool for Marketing, Managing, and Planning Municipal Park Systems.” *Journal of Park and Recreation Administration* 11:9-23.

Williams, Daniel and Deborah Carr. 1993. “The Sociocultural Meanings of Outdoor Recreation Places.” Pp. 209-219 in *Culture, Conflict, and Communication in the Wildland-Urban Interface*, edited by A. Ewert, D. Shavez, and A. Magill. Boulder, Co:Westview Press.