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Planning for environmental justice in an urban national park

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Title

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ABSTRACT

Urban national parks were designed in the 1970s to bring nature and recreational opportunities to socio-economically disadvantaged communities in the United States of America. Using the theoretical frame of environmental justice, this paper discusses findings of a recent survey of visitors to Los Angeles' Santa Monica Mountains National Recreation Area – the United States' largest urban national park. Findings show park visitors were predominantly White, affluent, and lived nearby. People of color traveled further, were significantly less likely to be return visitors, and were less inclined to use the park for active recreation. Seemingly, this park fails to meet the needs of the disadvantaged urban communities for whom it was created, a problem that may also affect other parks in the United States and potentially parks in other countries. Park planners and managers can take practical steps to increase accessibility to this park for people of color and low-income earners, and should monitor other parks for patterns of ethno-racially differentiated access and utilization.

Keywords

Urban national parks, race, ethnicity, environmental justice, Los Angeles

Introduction

Access to urban green-space can significantly affect the health and wellbeing of urban populations. Parks, urban trails, and other green-spaces may foster active lifestyles that combat obesity-related diseases and premature death (e.g. Coen and Ross, 2006, Frank and Engelke, 2001, Krenichyn, 2006, Maller, et al., 2005, Reynolds, et al., 2007). But not all people have good access to parks. To understand why, some researchers have turned to the perspective of environmental justice. Environmental justice is both a theoretical frame and a civil-rights based social movement that (i) seeks to understand how environmental benefits and harms are ethno-racially and socio-economically differentiated among urban populations, and (ii) attempts to ameliorate incidents of inequity (e.g. Agyeman, 2005; Pellow, 2000; Taylor, et al., 2006).

Internationally, researchers have recently shown that green-space is inequitably distributed within cities. So-called minority groups often have disproportionately poor access to urban open space – and in turn greater exposure to health-related problems. Examples are found in the United Kingdom (e.g. Ravenscroft and Markwell, 2000; Rishbeth, 2001), Australia (e.g. Maller et al., 2005; Timperio et al., 2007), Korea (e.g. Oh and Jeong, 2007) and Turkey (Erkip, 1997). This situation is also prevalent in the United States. In the United States, people of color (e.g. African-Americans, Native-Americans, Asians and Latinos) are frequently concentrated among socio-economically marginalized and vulnerable urban communities. And people of color do not appear to utilize urban open spaces at rates similar to those of White (sub)urban populations. This

is especially the case for open spaces located at the urban-wildlands interface (Ewert et al.,1993; Clifford, 1994).

But researchers have overlooked one important type of green-space – urban national parks (though Foresta, 1984 is a notable exception). Urban national parks were first created in the United States during the early 1970s under the ‘parks-to-people’ initiative, which sought to satisfy growing demands from impoverished and socially marginalized urban populations for access to green-space. These new parks were located on the doorstep of the nation’s largest cities. Park planners intended that these parks would provide both conservation and recreation benefits, including access to fresh air, solitude, and opportunities to encounter nature – the very benefits that remote national parks were traditionally thought to confer upon their users (Foresta, 1984). To date though, it appears that little – if any research has actually evaluated whether or not urban national parks do in fact confer these benefits to disadvantaged urban populations.

In this paper we present findings from a visitor survey that we conducted for the National Park Service in the summer of 2002 in Los Angeles’ Santa Monica Mountains National Recreation Area – the United States’ largest urban national park. We seek to better understand how people of color and the urban poor might perceive, access and use these important urban green-spaces. Our research had two objectives: (i) to understand if there were ethno-racial differences in the ways visitors utilized this park; and (ii) to establish if observed

differences were attributable to variations in socio-demographic characteristics, park accessibility, cultural preferences, or visitors' attitudes towards the park.

We begin by concisely reviewing how leisure theorists, geographers, planners and others have contributed to identifying the factors that affect park use. We focus upon race and ethnicity in particular, discussing the environmental justice implications of inequitable access to urban parks. Our research shows that people of color do not utilize the Santa Monica Mountains National Recreation Area at rates similar to the White population of Los Angeles. We suggest that the National Park Service should carefully examine the consequences that this has for the region's socially marginalized and disadvantaged communities. We conclude by identifying potential policy measures to ameliorate this situation, and suggest directions for further research. Although limited to one national park, results from our study suggest that the environmental justice implications of ethno-racially differentiated urban national park use – both the United States and internationally – warrant further investigation.

Race, health, justice and national parks

In the late 1960s and early 1970s, urban policy-makers in the United States embarked on a program of park reform to manage growing disaffection, racial tensions and escalating violence in the nation's largest cities. The findings of the McCone Commission into Los Angeles' Watts uprising of 1965 for example, highlighted the need for additional park provision in the poorest and most vulnerable parts of the city (Byrne, et al., 2007, West, 1989). US Secretary of the Interior Walter J. Hickel, outlined an agenda for the establishment of urban

national parks (Trelsad, 1997). Hickel's 'parks to people' initiative sought to bring the national park experience to socio-economically disadvantaged and ethno-racially marginalized urban residents (Foresta, 1984, McIntire, 1981).

It is unclear whether Hickel was aware that from their inception, national parks had been marred by acts of social exclusion – such as the forcible removal of Native Americans from land identified for park development (Meeker, et al., 1973, Olwig, 1996, 2005, Spence, 1999) ¹, or that African-Americans had historically been excluded from national parks (Floyd, 1999, Foresta, 1984, Foster, 1999, Johnson, 2005, Meeker, et al., 1973). What is clear, however, is that like many others at that time, Hickel believed urban green-spaces could function as a palliative for a range of social and environmental ills (Cranz, 1982, French, 1973, Gagen, 2004, Kornblum, 1983, National Park Service, 1975), an idea he shared with the progenitors of America's first public parks (Foley and Ward, 1993, Gray, 1973, Meeker, et al., 1973, Storman, 1991, Taylor, 1999, Young, 1996).

In just six years, following Hickel's initiative, the US Congress created five urban national parks. The first were New York's Gateway National Recreation Area (26, 607 acres / 10,767 ha) and San Francisco's Golden Gate National Recreation Area (75, 000 acres / 30,351 ha). Both were established on October 27, 1972. They were quickly followed by: the Cuyahoga River Valley National Recreation Area in Cleveland – created on December 27, 1974 (33, 000 acres / 13,354 ha); the Chattahoochee National Recreation Area in Atlanta – created on August 15, 1978 (10, 000 acres / 4,047 ha); and Los Angeles' Santa

Monica Mountains National Recreation Area (153,075 acres / 61,947 ha), created on November 10, 1978 (see figure 1).² All of these parks were located in close proximity to urban populations – two of them on the doorsteps of America’s largest cities. In under a decade, they accounted for a third of total annual visits to the US national park system (Everhart, 1983, Sellars, 1999).

FIGURE 1 HERE – THE SANTA MONICA MOUNTAINS NATIONAL PARK

Internationally, researchers have recently substantiated Hickel and others’ idea that parks of all varieties confer health-giving benefits upon their users (de Vries, et al., 2003, Manning and More, 2002, Williams, 2006). These benefits include stress relief, increased physical activity, social cohesion, improved mental health and psychological wellbeing (Coen and Ross, 2006, de Vries, et al., 2003, Ho, et al., 2005, Hung and Crompton, 2006, Kaplan, 2001, Kaplan, et al., 2004, Kleiber, et al., 2002, Krenichyn, 2006, Kuo, 2001, Maller, et al., 2005, Orsega-Smith, et al., 2004, Ulrich, 1979, 1984, Ulrich and Addoms, 1981, Ulrich, et al., 1991). But such park benefits appear not be evenly distributed among urban populations (Coen and Ross, 2006, Timperio, et al., 2005, Wolch, et al., 2005). In the United States, parks benefits seemingly accrue disproportionately to White and affluent residents who enjoy superior park access, whereas people of color have more limited access to park space, make fewer visits to urban open spaces, and use parks spaces differently (Floyd, 1999, Floyd, et al., 1994, Gobster, 2002, Goldsmith, 1994, Loukaitou-Sideris and Stieglitz, 2002, Meeker, et al., 1973, West, 1989, 1993a).

Leisure theorists offer several explanations to account for observed ethno-racial disparities in park use, including socio-economic marginality, ethno-racial distinctions in leisure preferences, uneven assimilation and acculturation outcomes, and racial discrimination. Some theorists have also linked age and gender to differential utilization (e.g. Ho, et al., 2005, Marne, 2001, Payne, et al., 2002, Sasidharan, et al., 2005, Shaw, 1994, Tinsley, et al., 2002, Virden and Walker, 1999).

The marginality and ethnicity hypotheses - first advanced by Washburn (1978) – have long held sway in leisure studies. Theorists who favor the first explanation believe that people of color face socio-economic barriers which constrain their park visitation and use – e.g. travel expenses, the cost of equipment, park entry fees and insufficient leisure time (see Floyd, 1999, Floyd, et al., 1993, Hutchison, 1987, Johnson, et al., 1998, Lee, et al., 2001, More and Stevens, 2000, More, 2002, Scott and Munson, 1994, Schwartz and Lin, 2006). Those favoring the ‘ethnicity’ perspective suggest that people of color possess distinctive ‘subcultural styles’ which shape their leisure preferences and activities - e.g. African-Americans may prefer basketball over hiking due to socialization (Gobster, 2002, Hutchison, 1988, Shinew, et al., 2004, Virden and Walker, 1999).

An offshoot of these earlier explanations, the acculturation / assimilation hypothesis suggests that people of color use parks differently to Whites by virtue of their ethno-racial heritage, because they have not yet adjusted to / adopted the dominant values of mainstream ‘American’ society (Baas, et al., 1993, Floyd, et

al., 1994, Ho, et al., 2005, Hutchison, 1987, Johnson, et al., 1998, Payne, et al., 2002, Shaull and Gramann, 1998, Tarrant and Cordell, 1999, Woodard, 1988). Finally, some leisure theorists have argued that racial discrimination causes lower levels of park use among people of color. These theorists believe that people of color will not visit parks where they 'feel unwelcome', and will be unlikely to travel through predominantly White neighborhoods to access parks (Floyd, 1998, Floyd, et al., 1993, Floyd and Johnson, 2002, Floyd, et al., 1994, Gobster, 2002, Hester Jr., et al., 1999, Lee, 1972, Meeker, et al., 1973, Philipp, 1997, 1999, Tierney, et al., 2001, Virden and Walker, 1999, West, 1989, 1993b).

These various perspectives suffer from deficiencies, including embedded Anglo-normativity, the conflation of race and ethnicity, assumptions that assimilation is desirable or inevitable, and a neglect of the role of space and place in shaping park utilization choices. Geographers, planners and psychologists offer alternative explanations. They suggest that cognitive, social and socio-spatial factors play a key role in shaping park use.

Socio-spatial explanations for park use posit that utilization is a function of: (i) the *proximity* of parks to the populations they serve; (ii) people's *access* to parks (e.g. presence or absence of impediments such as major road crossings); (iii) the attraction of park *facilities* – both physical infrastructure and recreational services / programs; (iv) park *landscape* features (i.e. density of vegetation and topographic variability); (v) *security* and safety (the presence or absence of rangers or police); (vi) park *maintenance* (how vegetation and park facilities and fixtures are maintained); (vii) *intervening opportunities* – e.g. alternative

recreational opportunities like shopping malls; and (viii) potential users' *knowledge* and awareness of parks (Bedimo-Rung, et al., 2005, Brownlow, 2006, Burgess, et al., 1988, Fesenmaier and Lieber, 1985, Hanink and White, 1999, Lee et al., 2005, Madge, 1997, Nicholls, 2001, Oguz, 2000, Saelens, et al., 2006, Smith, 1980, Spotts and Stynes, 1985, Stynes, et al., 1985, Talen, 1998, Talen and Anselin, 1998).

How potential park users perceive park spaces may also play an important role in determining park use. People's perceptions of park cleanliness, attractiveness, and affability are key considerations (Gobster, 1998, Kaplan, et al., 2004, Loukaitou-Sideris, 1995, Loukaitou-Sideris and Stieglitz, 2002, Madge, 1997, Philipp, 1999). Potential park visitors' perceptions of the character of park-adjacent neighborhoods may similarly influence their utilization choices, due to feelings of safety or vulnerability, affinity or difference (Burgess, et al., 1988, Gobster, 2002, Gold, 1986, Gollege and Stimson, 1997, Hester Jr., et al., 1999, Madge, 1997, McDonald and Newcomer, 1973, Perez-Verdin, et al., 2004, Ravenscroft and Markwell, 2000, Rishbeth, 2001, Schroeder, 1983, Westover, 1985).

Last, as we suggested at the outset of this paper, access to parks has recently emerged as an environmental justice issue. The environmental justice literature has long emphasized the inequitable exposure of people of color and the poor to environmental harms such as hazardous land uses (e.g. toxic waste storage and disposal facilities) and the inequitable application of environmental protection policies to those communities (e.g. Bullard, 1993, 1995, Cutter, 1995,

Holifield, 2001; Pastor, et al., 2001, Perhac, 1999). But a new perspective suggests inferior access to environmental benefits – or nature’s services (e.g. fresh water, clean air, open space) can also be regarded as an environmental inequity (Barnett, 2001, Di Chiro, 1996, Heynen, 2003, Optow and Clayton, 1994, Swyngedouw and Hynen, 2003).

A growing cadre of researchers from a range of disciplines has begun to investigate the environmental justice implications of poor access to urban parks and green-space (e.g. Byrne, et al., 2007, Coen and Ross, 2006, Frumkin, 2005, Henderson and Wall, 1979, Hester Jr., et al., 1999, Koehler and Wrightson, 1987, Smoyer-Tomic, et al., 2004, Timperio, et al., 2005). Although conflicting results have been reported (e.g. Floyd and Johnson, 2002, Lindsey, et al., 2001, Nicholls, 2001, Talen, 1998, Talen and Anselin, 1998, Tarrant and Cordell, 1999) increasing evidence suggests that park inequity may be widespread (Barnett, 2001, Brownlow, 2005, 2006, Nicholls, 2001, Pincetl and Gearin, 2005, Pulido, 2000, Wolch, et al., 2005). Regrettably, environmental justice researchers have paid scant attention to urban national parks.

In the remainder of this paper we show how an urban national park – the Santa Monica Mountains National Recreation Area – bears many of the hallmarks of a racially differentiated urban open space, with resulting environmental justice ramifications. We discuss results of a recreational trail use survey which suggest that the park does not cater to the needs of Los Angeles’ park deprived urban communities, despite having been created to bolster the availability of urban wildlands to just those residents.

Methods

In the summer of 2002 we conducted a survey of visitors to trails within the Santa Monica Mountains National Recreation Area for the National Park Service. Administered by three agencies – the National Park Service, the California Department of Parks and Recreation, and the Santa Monica Mountains Conservancy - the park is comprised of a mosaic of public and private property. Situated less than 10 miles (approximately 16 km) from downtown Los Angeles, the park is literally on the doorstep of the city.

Adjoining of one of North America's fastest growing, and racially diverse, metropolitan regions, the park provides an excellent case study for examining racially-differentiated access to and use of an urban national park. The park itself is bounded by the Pacific Ocean to the south, Simi Hills to the North, Las Posas Road to the west and Hollywood Freeway to the east (see figure 2). Comprised of over 150,000 acres (60,000 ha) of peaks, canyons, beaches, salt marshes, and critically endangered remnant sage scrub and oak-woodland vegetation, the park is both a significant ecological preserve and a valuable recreational resource.

INSERT FIGURE 2 ABOUT HERE – LOCATION MAP OF THE PARK

The purpose of our survey was to provide information to park planners from the above-mentioned agencies to assist in the development of an Interagency Regional Trail Management Plan for the park. Six inter-related

research questions underpinned our study: (1) do visitors to trails within the park differ in their socio-demographic characteristics?; (2) are there ethno-racial variations in the frequency of park visitation?; (3) are there differences in the activities of the various ethno-racial groups who use the park?; (4) are there variations in the attitudes of these ethno-racial groups towards the Santa Monica Mountains?; (5) do these ethno-racial groups experience different types of conflict within the park?; and (6) do they encounter different barriers to accessing the park?

A fundamental element of our research design was acknowledging that ethno-racial differences in park use should not be treated the same as individual differences like age, sex or height. Rather than treating race as just another socio-demographic characteristic, we seek to reveal how socio-economic marginalization on the basis of putative racial and / or ethnic differences may configure the opportunities of people of color for park access and utilization. We sought to understand how social relations like race may structure spaces like parks, and how in turn such socio-spatial relationships affect behaviors like park use.

Our research design therefore departs from leisure studies approaches, which examine differences in park use on the basis of country of origin (nationality), cultural values associated with ethnicity, or a presumed failure of certain ethno-racial groups to assimilate into society. Indeed, some leisure researchers appear confused about the differences between race and ethnicity. We distinguish here between the two as follows: *ethnicity* refers to putative

socio-cultural distinctiveness between populations (i.e. food preferences, social norms and mores, religion, music, clothing etc.), whereas *race* refers to purported physiognomic distinctiveness (e.g. hair type, skin color, facial features etc.) between populations.

Following critical race theory (Crenshaw et al., 1995), we take race not as a biologically inherited phenotype, but rather as a socially constructed system of oppression and privilege that withholds or confers benefits like access to education, housing, employment opportunities and the like on the basis of perceived physiognomic and socio-cultural differences, differences that dominant groups mobilize to justify the differential treatment of specific groups of people (Lipsitz, 1998; Schein, 2006). Like Omi and Winant (1994), we affirm that there is no biological basis to race.

We used an intercept survey to collect diverse data on trail use within the Santa Monica Mountains National Recreation Area, surveying users on site because experience suggested that response rates for a mail-back survey would be inadequate. We developed the survey instrument in consultation with staff from the National Park Service (NPS) and the Service's visiting chief social scientist. The instrument was approved by the Federal Office of Management and Budget. Following a training session with NPS volunteers who were to administer the survey, we made minor modifications to the instrument. The instrument was also reviewed and approved by the University of Southern California's Institutional Review Board.

Comprised of 28 questions, the survey instrument included fill in the blank, multiple choice and Likert-scale items. We collected a range of socio-demographic information, including trail users' age, sex, race and ethnicity, children under 18, household composition, home ownership, educational attainment, nationality, languages spoken at home, income and disability. We also included questions about visitors' use of the national park including: their reason for visiting the park; how often they visited; the activities they undertook while in the park; barriers they encountered to visitation; the names of local parks they visited instead of the national park; the distance traveled to get to the park; and their mode of travel (private automobile, public transport etc.). And we gathered information on visitor safety issues and visitor attitudes towards the mountains, and sought to ascertain their most frequently visited trails.³

We targeted the survey at visitors 18 years of age or older, who visited 23 primary trailheads and 10 secondary neighborhood entrances scattered throughout the park. NPS staff had a priori identified these trailheads as important. We administered the surveys over the course of two weekends, July 13-14 and July 21-22, 2002 - during morning (8am-1pm) and afternoon (3pm-7pm) shifts - to capture peak utilization periods. We also sought to avoid the hottest hours of the day when visitors were unlikely to be on the trails. Respondents were offered a gift bag from REI™ containing a bottle of water, snack bar and brochures as an incentive for participation.

We randomly selected potential respondents from the visitor stream, intercepting visitors either as they approached the trails for afternoon users or as

they exited the trail in the case of early morning visitors.⁴ We advised potential respondents about the nature of our research, and then invited them to complete the survey. Participation was strictly voluntary and respondents filled in their own survey forms. Visitors who declined to participate were recorded on a non-response sheet, together with information about the date and time of their visit, their sex, the number of people who were in their group, whether children accompanied them, and the observed activity that they might be undertaking (e.g. cycling, dog-walking, etc.). Information regarding the total number of visitors to each trail head was also entered on a log sheet. Most respondents completed the survey in approximately 8-9 minutes.⁵ Teams of counters were also stationed at the trailheads to record the number of users entering the trails.

Analysis

We checked completed surveys for missing or incomprehensible answers then tabulated and entered them into a database. We used SPSS to undertake Chi-square and ANOVA analyses to determine associations.

We also used a geographic information system (ArcView 3.2) to analyze spatial data, since multiple questions on the survey furnished geographic information (e.g. trail users' residential zip code, nearest major street intersection, and estimated travel time to the park). We geo-coded street intersections where provided, and calculated absolute distances from the park to those intersections. We performed a frequency analysis to delimit the spatial extent of the park's catchment area, enabling us to analyze the socio-demographic differences between park users and non-users. We then imported

US 2000 census data for census districts within the park catchment - using TIGER (Topologically Integrated Geographic Encoding and Referencing) data, and compiled descriptive statistics for the census districts. Last, we conducted a correlation analysis to determine if travel distances, race and frequency of visitation were related.

A small number of survey items generated confused responses concerning, for example, what constituted a 'local park'. Some questions, based directly on standard queries used by the US Census of Population, were perceived as ambiguous and many Hispanic/Latino respondents left the ethnicity question blank, suggesting that they did not identify with the choices provided.⁶ Many respondents ignored directions for a forced-choice question about reasons for protecting the Santa Monica Mountains and ticked both categories. Some respondents who answered a question on user impacts appeared to have answered that question based on opinion rather than personal experience. And finally, because the survey instrument was administered only in English, it is likely that some mono-lingual Spanish speakers were precluded from participating in the survey.⁷

Results

A total of 12,388 people visited park trails during the survey period. Almost 10% (1,228 visitors) were invited to participate in the survey and only 242 declined to participate. This yielded an 82% response rate. Of the 986 completed surveys just over 7% were unusable due to response errors, inaccuracies or illegible content, leaving a functional sample of 912 surveys. The majority of non-respondents

were male, largely reflecting the sex ratio of the overall survey sample. A total of 746 people within groups did not respond to the survey. They were accompanied by 36 companion animals and 220 children (table 1).

INSERT TABLE 1 HERE – SOCIO DEMOGRAPHICS

Visitors' socio-demographic characteristics

The typical park visitor was white, male, middle aged, and was born in the United States. He spoke English, was college - educated, was relatively affluent (earning between \$50, 000 and \$75, 000 per annum), owned his own home, did not have children under 18 years of age, lived in a single household, visited the park with friends and was a return visitor (table 1). Notwithstanding this, significant variation existed among park visitors.

Most visitors earned between \$50,000 and \$100,000 per annum. About one fifth reported earning \$50,000 to \$75,000 per annum.⁸ Most visitors were also very well-educated (85.6% possessed a college degree). Less than one percent did not have a high school diploma or GED. Although more men (59.3%) than women visited the park, this sex skew possibly reflects the higher proportion of visitors who pursued adventure sports like mountain biking (typically a male dominated sport). Indeed, most mountain bikers surveyed were male (86.1%), whereas equestrians were mostly females (80%). The median age of park users was 40.

Survey respondents were predominantly White (72%). The next most numerous ethno-racial groups in the park were Latinos (11.8%), followed by Asians (5.5%). African-Americans, Native Americans / Alaskan natives and Native Hawaiians / Pacific Islanders were the least represented ethno-racial groups in the sample (table 1).⁹ We limit our discussion in the balance of the paper to the three dominant ethno-racial groups - Whites, Latinos and Asians, because data are too small on the other groups to make meaningful comparisons.¹⁰ The three dominant groups varied significantly by age and income level, but not by educational attainment or residence time in the US (table 2). However, White visitors were significantly older than Latinos and Asians, and a significantly higher proportion of the latter two groups earned lower incomes than their White counterparts.

INSERT TABLE 2 HERE – SOCIO-DEMOGRAPHICS BY RACE

Park visitors were born in a variety of countries - 56 different nationalities were represented. Most respondents were born in the United States (77.3%), followed by Mexico, Iran, the Philippines, and the United Kingdom. For those visitors not born in the United States, the median duration of residence in the US was 20 years. Most visitors spoke English at home (86.5%), although other commonly spoken languages included Spanish (7.8%), Farsi (1.8%) and French. While many other languages were reported, these are statistically insignificant.

Patterns of visitation

Only thirteen percent of survey respondents were first time visitors to the park, but people of color were disproportionately represented among first time visitors. The median time spent on trails was 2 hours and visitors on average visited the park four times a month. The most popular time of day for visiting was the morning (63.8%); the most popular day of the week was a weekend day (72.5%), and the most frequently reported seasons for visiting were summer (71%) and spring (62.6%).¹¹ However, significant differences existed in visitation patterns among the three ethno-racial groups (see table 3).

INSERT TABLE 3 HERE – VISITATION PATTERNS

There were significant differences in patterns of park visitation among the three groups. Latinos and Asians were both less likely to visit the park on weekdays - a difference most pronounced among Asian visitors. Group size also varied significantly among the three ethno-racial groups. Asians were significantly more likely to visit the park with friends whereas Latino visitors were significantly more likely to visit with their families or with friends. Whites were significantly more likely to visit by themselves or with friends (see table 3) and spent significantly less time traveling to the park - about 10 minutes less than Latinos or Asians, because they lived nearby (see figures 2 and 3). Interestingly, Whites also exhibited a degree of territoriality, being significantly more likely to return to the same trail when they visited the park. Not surprisingly, Whites were significantly more likely to jog to the park and were more likely than other two groups to visit the park in winter.

Latinos were significantly less likely to be return visitors, as a higher proportion of Latinos were visiting the park for the first time. Latinos were less likely to visit in the spring. Latinos were also more likely to have cycled to the park. Asians made fewer visits per year, and were more likely to arrive by car – presumably related to the distance they lived from the park. A higher proportion of Asians also preferred to visit the park in the morning.

There were no significant variations among the dominant ethno-racial groups in the most common reasons for visiting the national park. In descending order they were – being outdoors, exercising, enjoying fresh air and appreciating the scenery (see table 4). The least likely reasons for visiting the park were – undertaking research and attending an organized event. A significantly greater proportion of White visitors (almost 10% more) went to the national park to experience nature. Whites were also more likely to go to the park for solitude, to see wildlife or enjoy scenery. Asians were more likely to visit the park for adventure sport. Asians and Latinos were less likely to visit the park to walk a pet, whereas Whites were less likely to go to the park to educate their children about nature. Also, a substantially smaller proportion of Latinos went to the park to exercise or to escape the city.

INSERT TABLE 4 HERE – REASON FOR NATIONAL PARK VISIT

We also surveyed visitors about why they would visit a local park instead of the Santa Monica Mountains National Recreation Area. The most frequently

reported reasons – in rank order – were limited time, easier access different recreation opportunities, and ease of taking children (see table 5). Interestingly, for Latino visitors, ease of taking children was a significant reason for visiting a local park. Also, a higher proportion of Whites stated that they did not visit local parks – some indicating that the national park in fact served as their local park. Neither community gardening nor visiting neighborhood friends were cited as reasons for visiting a neighborhood park.

INSERT TABLE 5 HERE – LOCAL PARK VISITATION

There were however, important differences between the groups. Although a slightly lower proportion of Asian visitors stated that they did not use local parks, a significantly higher proportion of Asian visitors identified limited time as a reason for visiting their local neighborhood park instead of the Santa Monica Mountains. When travel time is considered, it is obvious that Asians traveled further to visit the park (see table 3). Asian visitors also cited easier access as a reason for visiting their local park. It is likely that travel distance is related to this reason. A significantly higher proportion of Latino visitors stated that it was easier to take their children to local parks, that the parks had different recreation opportunities, and that those parks catered to group recreation.

Activities of trail users

Visitors to trails within the Santa Monica Mountains National Recreation Area participated in a wide variety of activities (see table 6). The six most prevalent were hiking (77.3%), sightseeing (55%), mountain-biking (26.3%), jogging

(21.9%) and bird-watching and picnicking (about 16%). When asked to identify only the principal activity engaged in during their visit from a list of fifteen alternatives, hiking (49.5%), mountain biking (18.7%), jogging (8.2%), sightseeing (6.1%) and dog-walking (4.7%) were reported as the dominant activities.

INSERT TABLE 6 HERE – VISITOR ACTIVITIES

All three ethno-racial groups listed hiking and sightseeing as the dominant activities. Latinos listed picnicking as the third most prevalent activity while Whites and Asians identified mountain biking. All three groups indicated jogging as the fourth most prevalent activity. The least preferred activities were horse riding for Latinos and Asians and painting / crafts for Whites.

There were statistical differences in the activities preferred by Latinos, Asians and Whites. Significantly more Latinos went for a swim and a picnic during their visit to the park and significantly fewer Whites went camping or swimming. Dog walking was more prevalent among ‘other’ ethno-racial groups. Horse-riding was predominantly a White activity. Picnicking, swimming, sunbathing and rock climbing were predominantly Latino activities, whereas mountain biking was predominantly an Asian activity. A significantly higher proportion of Latinos were picnickers than were visitors from other ethno-racial groups.

Problem activities and user conflict

The most often cited problem activities were mountain biking, dog walking and horse - riding, across all three ethno-racial groups (see table 7). A significantly higher number of Asian visitors identified horse-riding as a problem activity. A smaller proportion of Latinos saw mountain biking as a problem. The least problematic activities were running and hiking. This is not surprising, since the majority of respondents participated in hiking. Issues associated with problem activities were rudeness, litter and animal waste. Asians visitors were more likely to cite damage to plants, rude behavior and litter as problems within the park, and were significantly more likely to cite noise and animal waste as issues. Activities seen to be least problematic were off leash dogs and users scaring horses.

INSERT TABLE 7 HERE – USER CONFLICT AND PROBLEMS

Sources of information

The internet, organized groups and ranger-led walks were not important sources of information for any visitors, regardless of ethno-racial background (see table 8). However, given that the internet was not an option on the survey instrument but instead was ‘written in’ by respondents, it seems likely that it would have been cited more often had it been an option.

We found significant differences among the three ethno-racial groups regarding their primary sources of information about nature in the park (table 8). White visitors were significantly more likely to derive their nature information from living in the area. Personal observation, books and previous visits were

other common sources of information for White visitors. Significantly more Asian visitors depended on magazines for nature information. Asian visitors were also more likely to rely on personal observation and park brochures. Latinos were significantly less likely to derive nature information from living in the area. They were also much less likely to rely on books or previous visits. For Latino respondents, park signs, family and friends, and personal observation were important sources of information.

INSERT TABLE 8 HERE – INFORMATION SOURCES

Attitudes towards the park

The survey included a ‘forced choice’ question about attitudes that visitors held towards protection of the Santa Monica Mountains National Recreation Area. The three ethno-racial groups exhibited few differences regarding this question (table 9), with all three groups demonstrated a high degree of ecocentricism – favoring use of the park for habitat preservation over recreational functions (Merchant, 1996). Interestingly, a significantly higher proportion of Asian visitors stated that they had no opinion about the question. A slightly higher proportion of Latino visitors favored the use of the park for recreation and a slightly lower proportion favored using the park for both recreation and habitat functions.

INSERT TABLE 9 HERE – VISITOR ATTITUDES

Discussion

Our findings corroborate some of the hypotheses that leisure researchers have postulated to account for ethno-racial differences in park utilization. But they also suggest that other factors may be responsible for observed differences in national park visitation and use. For example, the three ethno-racial groups showed no statistically significant differences in the frequency of visitation, mode of travel to the park, or in attitudes towards the park. This is contrary to the ethnicity and assimilation / acculturation hypotheses, wherein people of color would be expected to vary significantly from White visitors across these variables.

However, we did find some evidence to support the marginality and ethnicity hypotheses. Although there were no significant differences in education attainment or the level of home ownership of the three groups, Whites earned significantly higher incomes than visitors of color. But the higher income of Whites may simply be an artifact of age, as Latinos and Asians were significantly younger than their White counterparts. People of color were also significantly more likely to travel further to visit the park, suggesting socio-economic differences in residential location (Hanink and White, 1999).

There were significant differences between group sizes among Whites and people of color, lending support to the ethnicity hypothesis. People of color were significantly more likely than Whites to visit in a group (with family, friends or a combination of the two). Similar results have been found for regional and local park visitation (Baas, et al., 1993, Ewert, et al., 1993, Floyd, 1999, 2001, Floyd,

et al., 1993, Floyd and Shiness, 1999, Tierney, et al., 2001, Washburn, 1978, West, 1993a). Although only one statistically significant variation occurred in reasons for visiting the park across the three ethno-racial groups – where significantly more Whites came to experience nature – there were greater variations in reasons for visiting a local park.

There were also statistically significant variations between the three groups in the activities they undertook within the national park. Asians were significantly less likely to walk a dog, Latinos were significantly more likely to have a picnic, and Whites were significantly less likely to camp or swim. Once again, differences in camping and dog-walking may be a function of distance, rather than ethno-racial preferences. Evidence also suggests that Asians did not favor horse-riding, as significantly more Asians identified it as a problem activity and they were significantly more likely to complain about animal wastes.

We did not find evidence to support the discrimination hypothesis. None of the groups reported incidents of racial discrimination as a barrier to access. Nor did we find evidence to support the assimilation / acculturation hypothesis. There were no significant differences in mean residence times among visitors of color.

Nonetheless, our results do shed light on how the socio-spatial characteristics of urban national parks might discourage people of color from visiting them. Our findings show that park visitors were relatively affluent. People of color traveled significantly further than Whites to visit the park. People of color also visited in significantly lower numbers relative to their share of the

park catchment population. The park therefore does not seem to function as was originally intended – that is to bring nature within reach of people of color and the urban poor. On the contrary, the park seems to play a more prominent role as a neighborhood park for residents of nearby affluent, White communities. Our GIS analysis shows that the neighborhoods surrounding the park are predominantly White (figure 3). Both Rishbeth (2001) and Ravenscroft and Markwell (2000) have reported similar findings in their studies of regional parks in the United Kingdom.

INSERT FIGURE 3 HERE – PERCENTAGE WHITE POPULATION

Supporting this perspective is the fact that the National Park Service classifies the trails favored by Latino visitors as destination trails (figure 4), whereas the trails preferred by Whites are classified as neighborhood trails. While it is possible that the increased distances that Latinos traveled to reach the park meant that they had less time to familiarize themselves with all park trails, it is also evident that few neighborhood access points are adequately signposted. This could suggest to people of color that such neighborhood trails are ‘off limits’. It is also possible that people of color perceive the character of the neighborhoods surrounding the park as a barrier to access, but this supposition will require further research before it can be verified.

INSERT FIGURE 4 HERE – PERCENTAGE LATINO POPULATION

Our findings also show that there are significant differences in the sources of information that the dominant ethno-racial groups rely upon to learn about the park. What this suggests is that institutional-discrimination could be at work. For example, all the park signs are written only in English (see figure 5). An examination of the National Park Service webpage for the park also shows that only a fraction of the park information is available in Spanish, and none of it is available in Mandarin, Cantonese, Japanese, Korean or Farsi – all languages spoken by park visitors. This is not a trivial issue, since non-English speakers may thus be unable to heed warnings about hazards within the park, such as the presence of rattlesnakes or flash floods. It could also potentially affect the ability of people of color to fully enjoy the park, and may result in the perception of being unsafe or worse still - unwelcome.

INSERT FIGURE 5 HERE –ENGLISH LANGUAGE PARK SIGN

Conclusions

Our findings have important implications for park management and outreach efforts by the National Park Service in the United States. But they also raise important questions for park-research internationally. As the first large-scale utilization survey conducted for an urban national park, our study shows that there is little ethno-racial variation in patterns of use, environmental attitudes, and experiences of user conflict. These findings challenge theories suggesting that park use is a function of cultural values. What our results do show however, is that the frequency of park visits, the distances traveled to reach the park and the percentage of people of color using the park vary substantially, thus lending

support to park utilization theories that consider park use to be a function of socio-spatial processes, the same processes that have thus far been underplayed by leisure researchers (Payne et al., 2002).

While many recent park use papers have sought to account for differences in park visitation on the basis of multiple factors including race ethnicity, gender and age, they overlook important socio-spatial factors that may underpin park use. Geographic variables such as residential location, park distribution and facility provision should be regarded as potential correlates of park use that warrant closer investigation. For instance, our findings suggest that the Santa Monica Mountains National Recreation Area may function as a predominantly White recreational space, which could diminish utilization by people of color.

What remains to be investigated though, is whether people of color actually perceive this park as a landscape that (re)produces ethno-racial dynamics inherent in broader American society, and if they do, how this perception might affect their utilization choices. For example, people of color may feel unwelcome at neighborhood trailheads, and ethno-racial discrimination may underlie instances of user conflict, thus discouraging use. One way of addressing such questions would be to use qualitative research techniques such as focus groups – as well as surveys – to better get at the thoughts, feelings, beliefs, values and attitudes of those people who do not use the national park.

Given our findings that the majority of park visitors arrived by private automobile, future research should also consider how access to public

transportation affects park use. For example, there are currently three bus routes that provide access to the Santa Monica Mountains National Recreation Area; a three-year demonstration project, ParkLINK, that offered shuttle service to the park, ended in 2007 (SMMNRA, 2007). Little is known about the socio-demographic characteristics of the populations the current routes serve, and whether patrons regard public transit as a viable way to access the park. Research could investigate how people of color feel about using public transit to access the park, whether they find it to be cost-effective, convenient, and efficient, and whether or not it meets other needs.

More research is also required to determine how urban national parks compare with other types of urban park in fostering health and wellbeing. Our research shows that active recreation is a key reason for visiting the Santa Monica Mountains National Recreation Area – especially hiking, mountain-biking and jogging. But little is known about what aspects of the park environment stimulate physical activity. For example, what is the role played by facilities such as restrooms, drinking fountains, rest areas, information signs and rubbish bins? Would improved parking, additional drinking fountains or trails dedicated to visitors and their companion-animals foster increases in park utilization – and concomitantly – in physical activity? Findings from recent recreational urban trail use research suggest this may be the case (Reynolds, et al., 2007), but we do not know if these findings apply to national parks.

Also, our research has shown that people of color used very different sources of information to learn about the park. What remains to be established is

how improved information about the park might foster increased utilization. For example, few people of color used the ranger services provided within the park. Does the ethno-racial identity of park rangers affect how people of color perceive them? Would better representation of Latinos and Asians among park staff improve visitation levels? An obvious possibility is that multi-lingual information brochures, signage and maps may give people of color access to a greater range of park facilities and spaces, and in turn foster higher levels of use, but this is yet to be tested.

And this issue is not restricted to the United States. Other settler-societies like Canada, Australia, New Zealand and South-Africa may also have large green-spaces characterized by ethno-racially differentiated patterns of park access and utilization. And because race and ethnicity are social constructs, these patterns are likely affected by histories of colonization, how racial formations have been defined and mobilized in various societies, and how various ethno-racial groups have responded to discrimination (see for example Tascón, 2008). Indeed there is evidence from Australia and South Africa that national parks may not be equally accessible to all social groups within those countries (e.g. Neumann, 2005; Thomas, 2001, 2002). And emerging research shows that environmental injustices associated with differential access to salubrious urban environments may be global, with examples from Australia (e.g. Arcioni and Mitchell, 2005; Hillman, 2002; Lloyd-Smith and Bell, 2003), Britain (Mitchell and Dorling, 2003), Asia (Iles, 2004) and Eastern Europe (Varga et al., 2002) illustrating the pernicious impacts and scope of environmental inequality within the world's cities.

The recent effloresce of park research augers well for improved understandings into the interconnections between nature, race / ethnicity and health. We now have an excellent opportunity to find better ways of meeting the needs of diverse communities for contact with nature and access to active recreation spaces that promote health and wellbeing. But much remains to be learned about how urban national parks meet the needs of diverse populations within large cities around the world, and in turn how planners might improve park access for socio-economically disadvantaged and socio-culturally marginalized communities.

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References

- Agyeman, J. (2005) *Sustainable Communities and the Challenge of Environmental Justice* (New York, New York University Press).
- Arcioni, E. and Mitchell, G. (2005) Environmental justice in Australia: When the RATS became IRATE, *Environmental Politics*, 14, pp. 363-379.
- Baas, J.M., Ewert, A. and Chavez, D.J. (1993) Influence of ethnicity on recreation and natural environment use patterns: Managing recreation sites for ethnic and racial diversity, *Environmental Management*, 17, pp. 523-529.
- Barnett, H. (2001) The Chinatown cornfields: Including environmental benefits in environmental justice studies, *Critical Planning*, 8, pp. 50-61.
- Bedimo-Rung, A., Mowen, A.J. and Cohen, D.A. (2005) The significance of parks to physical activity and public health, *American Journal of Preventative Medicine*, 28, pp. 159-168.
- Brownlow, A. (2005) Inherited fragmentations and narratives of environmental control in entrepreneurial Philadelphia, in: N. Heynen, Swyngedouw, E. and Kaika, M. (Ed.) *Inherited fragmentations and narratives of environmental control in entrepreneurial Philadelphia* (New York, Routledge).
- Brownlow, A. (2006) An archaeology of fear and environmental change in Philadelphia, *Geoforum*, 37, pp. 227-245.
- Bullard, R.D. (1993) Anatomy of environmental racism and the environmental justice movement, in: R.D. Bullard (Ed.) *Anatomy of environmental racism and the environmental justice movement* (Boston, Ma., South End Press).
- Bullard, R.D. (1995) Residential segregation and urban quality of life, in: B. Bryant (Ed.) *Residential segregation and urban quality of life* (Washington D.C., Island Press).

- Burgess, J., Harrison, C.M. and Limb, M. (1988) People, parks and the urban green: A study of popular meanings and values for open spaces in the city, *Urban Studies*, 25, pp. 455-473.
- Byrne, J., Kendrick, M. and Sroaf, D. (2007) The park made of oil: Towards a historical political ecology of the Kenneth Hahn State Recreation Area, *Local Environment*, pp.
- Clifford, F. (1994) Opening the National Parks to all of America, *Los Angeles Times, Valley Edn.*, Friday November 25, 1994, pp. 1.
- Coen, S.E. and Ross, N.A. (2006) Exploring the material basis for health: characteristics of parks in Montreal neighborhoods with contrasting health outcomes, *Health and Place*, 12, pp. 361-371.
- Cranz, G. (1982) *The Politics of Park Design: A History of Urban Parks* (Cambridge, MA, Harvard University Press).
- Crenshaw, K., Gotanda, N., Peller, G. and Thomas, K. (eds.) (1995) *Critical Race Theory: The Key Writings that Formed the Movement* (New York, The New York Press).
- Cutter, S.L. (1995) Race, class and environmental justice, *Progress in Human Geography*, 19, pp. 111-122.
- de Vries, S., Verheij, R.A., Groenewegen, P.P. and Spreeuwenberg, P. (2003) Natural environments - Healthy environments? An exploratory analysis of the relationship between green-space and health, *Environment and Planning A*, 35, pp. 1717-1731.
- Di Chiro, G. (1996) Nature as community: The convergence of environment and social justice, in: W. Cronon (Ed.) *Nature as community: The convergence of environment and social justice* (New York, W.W. Norton and Company).
- Erkip, F. (1997) The distribution of urban public services: the case of parks and recreation services in Ankara, *Cities*, 14, pp. 353-361.

- Everhart, W.C. (1983) *The National Park Service* (Boulder, Co., Westview Press).
- Ewert, A.W., Chavez, D.J. and Magill, A.W. (1993) *Culture, Conflict and Communications at the Wildlands-Urban Interface* (Boulder, Westview Press).
- Fesenmaier, D.R. and Lieber, S.R. (1985) Spatial structure and behavior response in outdoor recreation participation, *Geografiska Annaler B*, 67, pp. 131-138.
- Floyd, M.F. (1998) Getting beyond marginality and ethnicity: The challenge for race and ethnic studies in leisure research, *Journal of Leisure Research*, 30, pp. 3-22.
- Floyd, M.F. (1999) Race, ethnicity and use of the National Park System, *Social Science Research Review*, 1, pp. 1-24.
- Floyd, M.F. (2001) Managing parks in a multicultural society: Searching for common ground, *Managing Recreation Use*, 18, pp. 41-51.
- Floyd, M.F., Gramann, J.H. and Saenz, R. (1993) Ethnic factors and the use of public outdoor recreation areas: The case of Mexican Americans, *Leisure Sciences*, 15, pp. 83-98.
- Floyd, M.F. and Johnson, C.Y. (2002) Coming to terms with environmental justice in outdoor recreation: A conceptual discussion with research implications, *Leisure Sciences*, 24, pp. 59-77.
- Floyd, M.F. and Shinew, K.J. (1999) Convergence and divergence in leisure style among Whites and African Americans: Towards an interracial contact hypothesis, *Journal of Leisure Research*, 31, pp. 359-384.
- Floyd, M.F., Shinew, K.J., McGuire, F.A. and Noe, F.P. (1994) Race, class and leisure activity preferences: Marginality and ethnicity revisited, *Journal of Leisure Research*, 26, pp. 158-173.

- Foley, J. and Ward, V. (1993) Recreation, the riots and a healthy L.A., *Parks and Recreation*, March, pp. 66-69.
- Foresta, R. (1984) America's urban national parks, *Urbanism Past and Present*, 18, pp. 1-14.
- Foster, M.S. (1999) In the face of "Jim Crow": Prosperous blacks and vacations, travel and outdoor leisure, 1890-1945, *The Journal of Negro History*, 84, pp. 130-149.
- Frank, L.D. and Engelke, P.O. (2001) The built environment and human activity patterns: exploring the impacts of urban form on public health, *Journal of Planning Literature*, 16, pp. 202-218.
- French, J.S. (1973) The decline and deterioration of the American city park, in: D. Gray and D.A. Pelegrino (Ed.) *The decline and deterioration of the American city park* (Dubuque, Iowa, W.C. Brown Company).
- Frumkin, H. (2005) Health, equity and the built environment, *Environmental Health Perspectives*, 113, pp. A290-A291.
- Gagen, E.A. (2004) Making America flesh" physicality and nationhood in early twentieth-century education reform, *Cultural Geographies*, 11, pp. 417-442.
- Gobster, P.H. (1998) Urban parks as green walls or green magnets? Interracial relations in neighborhood boundary parks, *Landscape and Urban Planning*, 41, pp. 43-55.
- Gobster, P.H. (2002) Managing urban parks for racially and ethnically diverse clientele, *Leisure Sciences*, 24, pp. 143-159.
- Gobster, P.H. (2005) Recreation and leisure research from an active living perspective: Taking a second look at urban trail use data, *Leisure Sciences*, 27, pp. 367-383.
- Gold, S.M. (1986) User characteristics and response to vegetation in neighbourhood parks, *Arboricultural Journal*, 10, pp. 275-287.

- Goldsmith, J. (1994) Designing for diversity, *National Parks*, 68, pp. 20-21.
- Gollege, R.G. and Stimson, R.J. (1997) *Spatial Behavior: A Geographic Perspective* (New York, The Guildford Press).
- Gray, D.E. (1973) The un-hostile park, in: D. Gray and D.A. Pelegriano (Ed.) *The un-hostile park* (Dubuque, Iowa, W.C. Brown Company).
- Hanink, D.M. and White, K. (1999) Distance effects in the demand for wildland recreation services: the case of national parks in the United States, *Environment and Planning A*, 31, pp. 477-492.
- Henderson, H. and Wall, G. (1979) Accessibility to urban open space, in: G. Wall (Ed.) *Accessibility to urban open space* (Waterloo, Department of Geography, University of Waterloo).
- Hester Jr., R.T., Blazej, N.J. and Moore, I.S. (1999) Whose wild? Resolving cultural and biological diversity conflicts in urban wilderness, *Landscape Journal*, 18, pp. 137-146.
- Heynen, N. (2003) The scalar production of injustice within the urban forest, *Antipode*, 35, pp. 980-998.
- Hillman, M. (2002) Environmental justice: a crucial link between environmentalism and community development?, *Community Development Journal*, 37, pp. 349-360.
- Ho, C., Sasidharan, V., Elmendorf, W., Willits, F.K., Graefe, A. and Godbey, G. (2005) Gender and ethnic variations in urban park preferences, visitation and perceived benefits, *Journal of Leisure Research*, 37, pp. 281-306.
- Holifield, R. (2001) Defining environmental justice and environmental racism, *Urban Geography*, 22, pp. 78-90.
- Hung, K. and Crompton, J.L. (2006) Benefits and constraints associated with the use of an urban park reported by a sample of elderly in Hong Kong, *Leisure Sciences*, 25, pp. 291-311.

- Hutchison, R. (1987) Ethnicity and urban recreation: Whites, Blacks and Hispanics in Chicago's public parks, *Journal of Leisure Research*, 19, pp. 205-222.
- Hutchison, R. (1988) A critique of race, ethnicity, and social class in recent leisure-recreation research, *Journal of Leisure Research*, 20, pp. 10-30.
- Iles, A. (2004) Mapping environmental justice in technology flows: Computer waste impacts in Asia, *Global Environmental Politics*, 4, pp. 76-107.
- Johnson, C.Y., Bowker, J.M., English, D.B.K. and Worthen, D. (1998) Wildland recreation in the rural South: An examination of marginality and ethnicity theory, *Journal of Leisure Research*, 30, pp. 101-120.
- Johnson, S. (2005) *Invisible Men: Buffalo Soldiers of the Sierra Nevada National Park Service*.
- Kaplan, R. (2001) The nature of the view from home: Psychological benefits, *Environment and Behavior*, 33, pp. 507-542.
- Kaplan, R., Austin, M.E. and Kaplan, S. (2004) Open space communities: Resident perceptions, nature benefits and problems with terminology, *Journal of the American Planning Association*, 70, pp. 300-312.
- Kleiber, D.A., Hutchison, S.L. and Williams, R. (2002) Leisure as a resource in transcending negative life events: Self protection, self restoration and personal transformation, *Leisure Sciences*, 24, pp. 219-235.
- Koehler, D.H. and Wrightson, M.T. (1987) Inequality in the delivery of urban services: A reconsideration of the Chicago Parks, *The Journal of Politics*, 49, pp. 80-99.
- Kornblum, W. (1983) Racial and cultural groups on the beach, *Ethnic Groups*, 5, pp. 109-124.
- Krenichyn, K. (2006) 'The only place to go and be in the city': women talk about exercise, being outdoors, and the meanings of a large urban park, *Health and Place*, 12, pp. 631-643.

- Kuo, F.E. (2001) Coping with poverty: Impacts of environment and attention in the inner city, *Environment and Behavior*, 33, pp. 5-34.
- Lee, J., Scott, D. and Floyd, M.F. (2001) Structural inequalities in outdoor recreation participation: A multiple hierarchy perspective, *Journal of Leisure Research*, 33, pp. 427-449.
- Lee, R.E., Booth, K.M., Reese-Smith, J.Y., Regan, G. and Howard, H.H. (2005) The Physical Activity Resource Assessment (PARA) instrument: evaluating features, amenities and incivilities of physical activity resources in urban neighborhoods, *International Journal of Behavioral Nutrition and Physical Activity*, 2, pp. 13.
- Lee, R.G. (1972) The social definition of outdoor recreation places, in: W.R. Burch, N. Cheek and L. Taylor (Ed.) *The social definition of outdoor recreation places* (New York, Harper Row).
- Lindsey, G., Maraj, M. and Kuan, S.-C. (2001) Access, equity and urban greenways: An exploratory investigation, *The Professional Geographer*, 53, pp. 332-346.
- Lipsitz, G. (1998) *The Possessive Investment in Whiteness: How White People Profit from Identity Politics* (Philadelphia, Temple University Press).
- Lloyd-Smith, M.E. and Bell, L. (2003) Toxic disputes and the rise of environmental justice in Australia, *International Journal of Occupational and Environmental Health*, 9, 14-23.
- Loukaitou-Sideris, A. (1995) Urban form and social context: Cultural differentiation in the uses of urban parks, *Journal of Planning Education and Research*, 14, pp. 89-102.
- Loukaitou-Sideris, A. and Stieglitz, O. (2002) Children in Los Angeles' parks: A study of equity, quality and children's satisfaction with neighborhood parks, *Town Planning Review*, 73, pp. 467-488.

- Madge, C. (1997) Public parks and the geography of fear, *Tijdschrift voor Economische en Sociale Geografie*, 88, pp. 237-250.
- Maller, C., Townsend, M., Pryor, A., Brown, P. and St. Leger, L. (2005) Healthy nature healthy people, 'contact with nature' as an upstream health promotion intervention for populations, *Health Promotion International*, 21, pp. 45-54.
- Manning, R. and More, T. (2002) Recreational values of public parks, *The George Wright Forum*, 19, pp. 21-30.
- Marne, P. (2001) Whose public space was it anyway? Class, gender and ethnicity in the creation of Sefton and Stanley Parks, Liverpool: 1875-1872, *Social and Cultural Geography*, 2, pp. 421-443.
- McDonald, A.D. and Newcomer, R.J. (1973) Differences in the perception of a city park as a supportive or threatening environment, in: D. Gray and D.A. Pelegriano (Ed.) *Differences in the perception of a city park as a supportive or threatening environment* (Dubuque, Iowa, W.C. Brown Company).
- McIntire, E. (1981) The un-making of a park concept, *Transition: The Quarterly Journal of Socially and Ethically Responsible Geographers*, 11, pp. 7-12.
- Meeker, J.W., Woods, W.K. and Lucas, W. (1973) Red, white and black in the national parks, *The North American Review*, Fall, pp. 3-7.
- Merchant, C. (1996) *Radical Ecology: The Search for a Livable World* (New York, Routledge).
- Mitchell, G. and Dorling, D. (2003) An environmental justice analysis of British air quality, *Environment and Planning A*, 35, pp. 909-929.
- More, T.A. (2002) The marginal user as the justification for public recreation: A rejoinder to Crompton, Driver and Dustin, *Journal of Leisure Research*, 34, pp. 103-118.
- More, T. and Stevens, T. (2000) Do user fees exclude low-income people from resource-based recreation?, *Journal of Leisure Research*, 32, pp. 341-357.

- National Park Service (1975) *Gateway National Recreation Area. Special Study: The 1974 Summer Season* (New York, National Park Service).
- Neumann, R.P. (2005) *Making Political Ecology* (London, Hodder Arnold).
- Nicholls, S. (2001) Measuring the accessibility and equity of public parks: A case study using GIS, *Managing Leisure*, 6, pp. 201-219.
- Oguz, D. (2000) User survey's of Ankara's urban parks, *Landscape and Urban Planning*, 52, pp. 165-171.
- Oh, K. and Jeong, S. (2007) Assessing the spatial distribution of urban parks using GIS, *Landscape and Urban Planning*, 82, pp. 25-32.
- Olwig, K.R. (1996) Reinventing common nature: Yosemite and Mount Rushmore - a meandering tale of double nature, in: W. Cronon (Ed.) *Reinventing common nature: Yosemite and Mount Rushmore - a meandering tale of double nature* (New York, W.W. Norton and Company).
- Olwig, K.R. (2005) Representation and alienation in the political land-scape, *Cultural Geographies*, 12, pp. 19-40.
- Omi, M. and Winant, H. (1994) *Racial Formation in the United States: From the 1960s to the 1990s*, 2nd. Edn. (New York, Routledge).
- Optow, S. and Clayton, S. (1994) Green justice: Conceptions of fairness and the natural world, *Journal of Social Issues*, 50, pp. 1-11.
- Orsega-Smith, E., Mowen, A.J., Payne, L.L. and Godbey, G. (2004) The interaction of stress and park use on psycho-physiological health in older adults, *Journal of Leisure Research*, 36, pp. 232-256.
- Pastor, M., Sadd, J.L. and Hipp, J. (2001) Which came first? Toxic facilities, minority move-in, and environmental justice, *Journal of Urban Affairs*, 23, pp. 1-21.

- Payne, L.L., Mowen, A.J. and Orsega-Smith, E. (2002) An examination of park preferences and behaviors among urban residents: The role of residential location, race and age, *Leisure Sciences*, 24, pp. 181-198.
- Pellow, D.N. (2000) Environmental inequality formation: Toward a theory of environmental injustice, *American Behavioral Scientist*, 43, pp. 581-601.
- Perez-Verdin, G., Lee, M.E. and Chavez, D.J. (2004) Outdoor recreation in a protected area in Southern Durango, Mexico: Analysis of local residents' perceptions, *Society and Natural Resources*, 17, pp. 897-910.
- Perhac, R.M. (1999) Environmental justice: The issue of disproportionality, *Environmental Ethics*, 21, pp. 81-92.
- Philipp, S.F. (1997) Race, Gender and Leisure Benefits, *Leisure Sciences*, 19, pp. 191-207.
- Philipp, S.F. (1999) Are we welcome? African-American racial acceptance in leisure activities and the importance given to children's leisure, *Journal of Leisure Research*, 31, pp. 385-403.
- Pincetl, S. and Gearin, E. (2005) The reinvention of public green space, *Urban Geography*, 26, pp. 365-384.
- Pulido, L. (2000) Rethinking environmental racism: White privilege and urban development in Southern California, *Annals of the Association of American Geographers*, 90, pp. 12-40.
- Ravenscroft, N. and Markwell, S. (2000) Ethnicity and the integration and exclusion of young people through urban park and recreation provision, *Managing Leisure*, 5, pp. 135-150.
- Reynolds, K.D., Wolch, J., Byrne, J., Chou, C.-P., Feng, G., Weaver, S. and Jerrett, M. (2007) Trail characteristics as correlates of urban trail use, *American Journal of Health Promotion*, 21, pp. 335-345.
- Rishbeth, C. (2001) Ethnic minority groups and the design of public open space: an inclusive landscape?, *Landscape Research*, 26, pp. 351-366.

- Saelens, B.E., Frank, L.D., Auffrey, C., Whitaker, R.C., Burdette, H.L. and Colabianchi, N. (2006) Measuring physical environments of parks and playgrounds: EAPRS instrument development and inter-rater reliability, *Journal of Physical Activity and Health*, 3, pp. S190-S207.
- Sasidharan, V., Willits, F. and Godbey, G. (2005) Cultural differences in urban recreation patterns: an examination of park usage and activity participation across six population subgroups, *Managing Leisure*, 10, pp. 19-38.
- Santa Monica Mountains National Recreation Area (SMMNRA). (2007). "Frequently asked questions about the ending of the ParkLINK shuttle." <http://www.researchlearningcenter.com/samo/shuttle/> . Accessed March 27, 2008.
- Schein, R.H. (2006) *Landscape and Race in the United States* (New York, Routledge).
- Schroeder, H. (1983) Variations in the perception of urban forest recreation sites, *Leisure Sciences*, 5, pp. 221-230.
- Schwartz, Z. and Lin, L-C. (2006) The impact of fees on visitation of national parks, *Tourism Management*, 27, pp. 1386-1396.
- Scott, D. and Munson, W. (1994) Perceived constraints to park usage among individuals with low incomes, *Journal of Park and Recreation Administration*, 12, pp. 79-96.
- Sellars, M.R.R.W. (1999) *Preserving Nature in the National Parks: A History* (New Haven, CT, Yale University Press).
- Shaull, S.L. and Gramann, J.H. (1998) The effect of cultural assimilation on the importance of family-related and nature-related recreation among Hispanic-Americans, *Journal of Leisure Research*, 30, pp. 47-63.
- Shaw, S.M. (1994) Gender, leisure and constraint: Towards a framework for the analysis of women's leisure, *Journal of Leisure Research*, 26, pp. 8-22.

- Shinew, K.J., Floyd, M.F. and Parry, D. (2004) Understanding the relationship between race and leisure activities and constraints: Exploring an alternative framework, *Leisure Sciences*, 26, pp. 181-199.
- Smith, S.L.J. (1980) Intervening opportunities and travel to urban recreation centers, *Journal of Leisure Research*, 12, pp. 296-308.
- Smoyer-Tomic, K.E., Hewko, J.N. and Hodgson, M.J. (2004) Spatial accessibility and equity of playgrounds in Edmonton, Canada, *The Canadian Geographer*, 48, pp. 287-302.
- Spence, M.D. (1999) *Dispossessing the wilderness: Indian removal and the making of National Parks* (New York, Oxford University Press).
- Spotts, D.M. and Stynes, D.J. (1985) Measuring the public's familiarity with recreation areas, *Journal of Leisure Research*, 17, pp. 253-265.
- Storman, W.F. (1991) The ideology of the American urban parks and recreation movement: Past and future, *Leisure Sciences*, 13, pp. 137-151.
- Stynes, D.J., Spotts, D.M. and Strunk, J.R. (1985) Relaxing assumptions about perfect information in park visitation models, *Professional Geographer*, 37, pp. 21-28.
- Swyngedouw, E. and Hynen, N. (2003) Urban political ecology, justice and the politics of scale, *Antipode*, 35, pp. 898-918.
- Talen, E. (1998) Visualizing fairness: equity maps for planners, *Journal of the American Planning Association*, 64, pp. 22-38.
- Talen, E. and Anselin, L. (1998) Assessing spatial equity: an evaluation of measures of accessibility to public playgrounds, *Environment and planning A*, 30, pp. 595-613.
- Tarrant, M.A. and Cordell, H.K. (1999) Environmental justice and the spatial distribution of outdoor recreation sites: An application of Geographic Information Systems, *Journal of Leisure Research*, 31, pp. 18-34.

- Tascón, S.M. (2008) Narratives of race and nation: Everyday whiteness in Australia, *Social Identities*, 14, pp. 253-274.
- Taylor, D.E. (1999) Central Park as a model for social control: Urban parks, social class and leisure behavior in Nineteenth-Century America, *Journal of Leisure Research*, 31, pp. 420-477.
- Taylor, W., C., Carlos Poston, W.S., Jones, L. and Kraft, M.K. (2006) Environmental Justice: Obesity, Physical Activity, and Healthy Eating, *Journal of Physical Activity and Health*, 3, pp. S30-S54.
- Thomas, M. (2001) *A Multicultural Landscape: National Parks and the Macedonian Experience* (Hurstville, N.S.W., National Parks and Wildlife Service).
- Thomas, M. (2002) *Moving Landscapes: National Parks and the Vietnamese Experience* (Hurstville, N.S.W., National Parks and Wildlife Service).
- Tierney, P.T., Dahl, R. and Chavez, D.J. (2001) Cultural diversity in use of undeveloped natural areas by Los Angeles County residents, *Tourism Management*, 22, pp. 271-277.
- Timperio, A., Salmon, J., Telford, A. and Crawford, D. (2005) Perceptions of local neighborhood environments and their relationship to childhood overweight and obesity, *International Journal of Obesity*, 29, pp. 170-175.
- Timperio, A., Ball, K., Salmon, J., Roberts, R. and Crawford, D. (2007) Is availability of public open space equitable across areas?, *Health and Place*, 13, pp. 335-340.
- Tinsley, H.E.A., Tinsley, D.J. and Croskeys, C.E. (2002) Park usage, social milieu and psychosocial benefits of park use reported by older urban park users from four ethnic groups, *Leisure Sciences*, 24, pp. 199-218.
- Trelsad, B.R. (1997) The Presidio Trust legislation: preservation or privatization?, *Urban Ecosystems*, 1, pp. 135-153.

- Ulrich, R.S. (1979) Visual landscapes and psychological well-being, *Landscape Research*, 4, pp. 17-23.
- Ulrich, R.S. (1984) View through a window may influence recovery from surgery, *Science*, 224, pp. 420-421.
- Ulrich, R.S. and Addoms, D.L. (1981) Psychological and recreational benefits of a residential park, *Journal of Leisure Research*, 13, pp. 43-65.
- Ulrich, R.S., Simons, R.F., Losito, B.D., Fiorito, E., Miles, M.A. and Zelson, M. (1991) Stress recovery during exposure to natural and urban environments, *Journal of Environmental Psychology*, 11, pp. 201-230.
- Varga, C., Kiss, I. and Ember, I. (2002) The lack of environmental justice in Central and Eastern Europe, *Environmental Health Perspectives*, 110, pp. A662-A663.
- Virden, R.J. and Walker, G.J. (1999) Ethnic/racial and gender variations among meanings given to, and preferences for, the natural environment, *Leisure Sciences*, 21, pp. 219-239.
- Washburn, R.F. (1978) Black underparticipation in wildland recreation: Alternative explanations, *Leisure Sciences*, 2, pp. 201-210.
- West, P.C. (1989) Urban region parks and black minorities: Subculture, marginality and interracial relations in park use in the Detroit metropolitan area, *Leisure Sciences*, 11, pp. 11-28.
- West, P.C. (1993a) The tyranny of metaphor: Interracial relations, minority recreation, and the wildlands-urban interface, in: A. Ewert, D.J. Chavez and A.W. Magill (Ed.) *The tyranny of metaphor: Interracial relations, minority recreation, and the wildlands-urban interface* (Boulder, Westview Press).
- West, P.C. (1993b) The tyranny of metaphor: Interracial relations, minority recreation, and the wildlands-urban interface, in: A. Ewert, D.J. Chavez and A.W. Magill (Ed.) *The tyranny of metaphor: Interracial relations,*

minority recreation, and the wildlands-urban interface (Boulder, Westview Press).

Westover, T.N. (1985) Perceptions of crime and safety in three Midwestern parks, *Professional Geographer*, 37, pp. 410-420.

Williams, B. (2006) The paradox of parks, *Global Identities in Culture and Power*, 13, pp. 139-171.

Wolch, J., Wilson, J.P. and Fehrenbach, J. (2005) Parks and park funding in Los Angeles: An equity-mapping analysis, *Urban Geography*, 26, pp. 4-35.

Woodard, D. (1988) Class, regionality, and leisure among urban black Americans: the post-civil rights era, *Journal of Leisure Research*, 20, pp. 87-105.

Young, T. (1996) Social reform through parks: the American Civic Association's program for a better America, *Journal of Historical Geography*, 22, pp. 460-472.

FIGURES

Figure 1 – The Santa Monica Mountains National Recreation Area

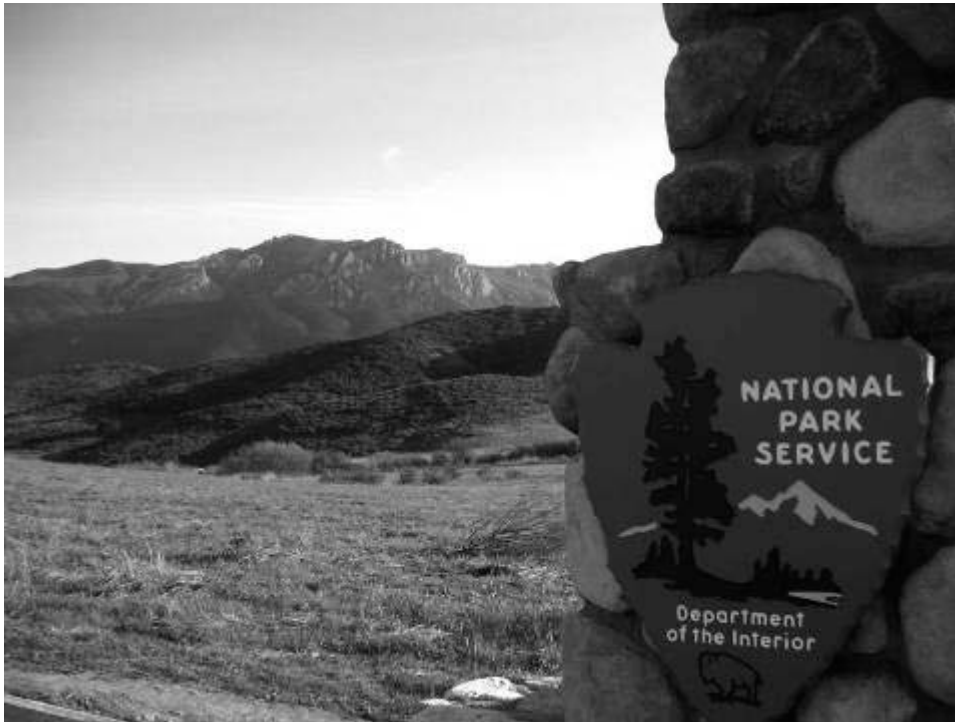


Figure 2 – Regional location

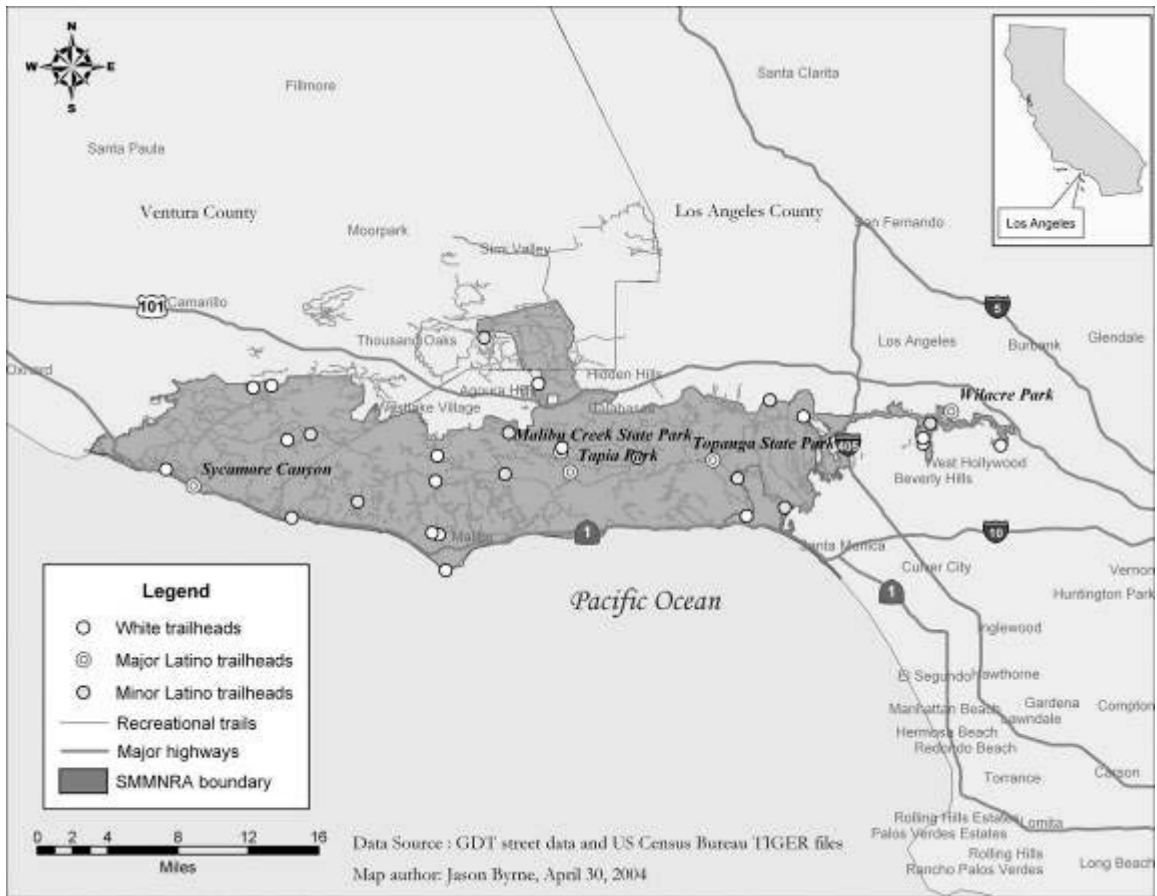


Figure 3 – Percent White population in neighborhoods surrounding the park

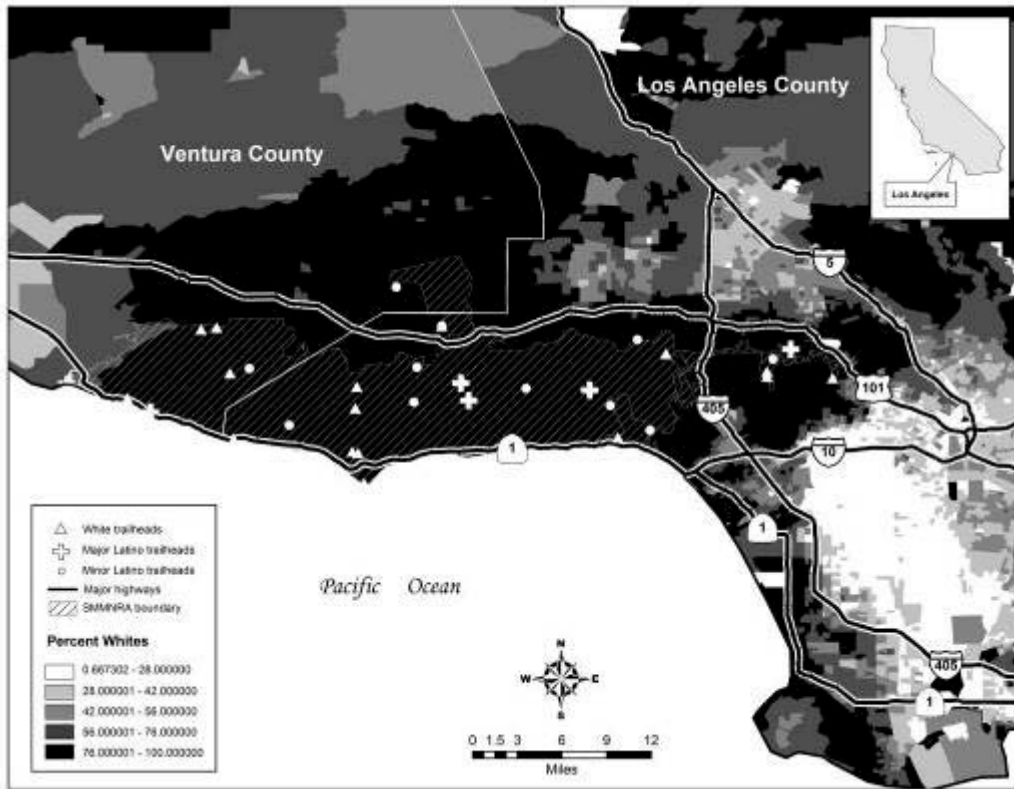


Figure 4 – Percent Latino population in neighborhoods surrounding the park

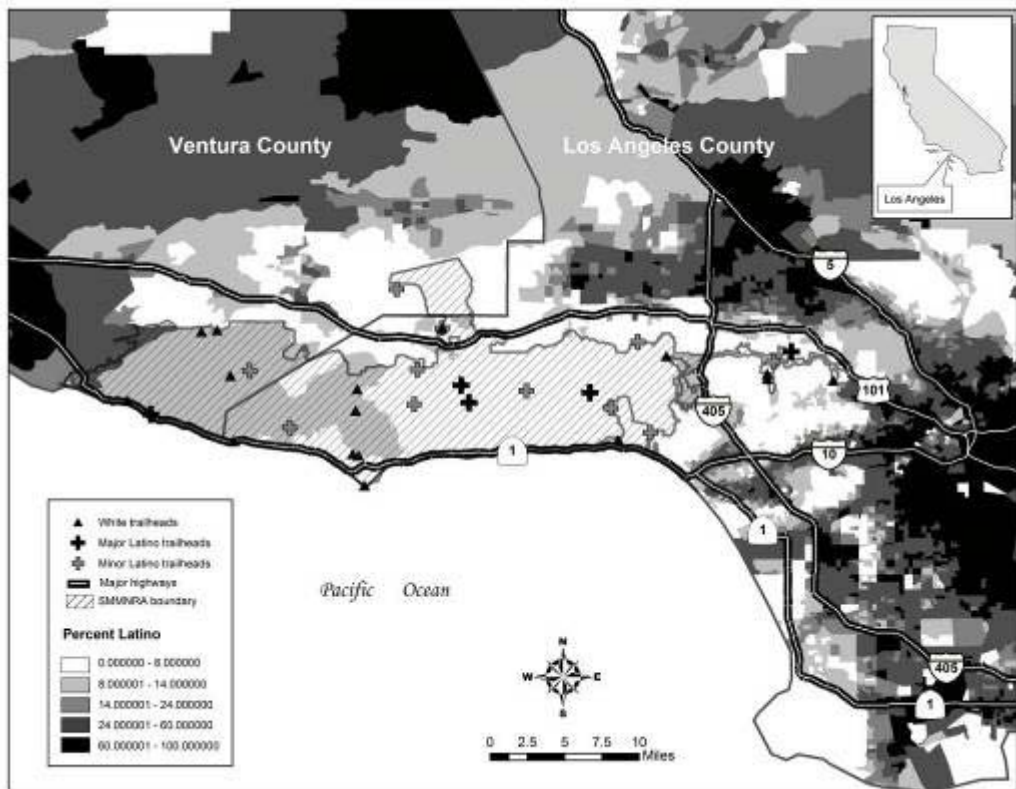


Figure 5 – English-language sign within the national park



Table 1 – Socio-demographic profile of trail users

Demographic characteristic	Number	Percentage
<i>Sex (n=912)</i>		
Female trail users	371	40.7
Male trail users	541	59.3
<i>Age (n=912)</i>		
18-39 years	438	48.0
40-64 years	445	48.8
Over 65 years	29	3.2
<i>Education (n=898)</i>		
High school student	52	5.8
No high school	8	0.9
High school / GED	69	7.7
College	767	85.6
<i>Income (n=884)</i>		
Less than \$25,000	51	5.8
\$25,000 - \$50,000	139	15.7
\$50,000 - \$75,000	164	18.6
\$75,000 - \$100,000	130	14.7
More than \$100,000	308	34.8
Did not wish to answer	92	10.4
<i>Household composition (n=891)</i>		
Single	294	33.0
Unrelated adults	81	9.1
Couple without children <18	232	26.0
Couple with children <18	171	19.2
Single parent with children <18	42	4.7
Multigenerational household	71	8.0
<i>Home ownership (n=891)</i>		
Own home	562	63.1
Rent	329	36.9
<i>Country of origin (n=912)</i>		
USA	705	77.3
Mexico	20	2.2
Iran	15	1.6
Other ¹	172	18.9
More than 20 years in USA	100	56.2
<i>Race (n=912)</i>		
Native American or Alaskan Native	12	1.3
Asian	50	5.5
Black or African-American	15	1.6
Native Hawaiian or Pacific Islander	5	0.5
White	657	72.0
Did not wish to answer	158	17.3
Latino (n=871) ²	103	11.8

Notes: 1. Over 56 different nationalities were represented among visitors to the park. 2. Latinos may have responded as being either Black or White so percentages add up to more than 100%.

Table 2 – Comparison of visitors’ socio-demographic differences by race

Variable	White	Latino ¹	Asian
Age (years) (mean)**	41.9	35.5	37.2
Education (level) %			
High school student	5.1	11.7	2.0
No high school diploma or GED	0.8	4.9	0.0
High school diploma or GED	6.3	14.6	6.0
College	87.8	68.9	92.0
Income (\$) %*			
Less than \$50,000	17.5	39.0	38.8
\$50,001 - \$100,000	34.1	28.0	24.5
\$100,001 - \$200,000	27.1	17.0	28.6
Greater than \$200,000	12.5	3.0	4.1
Duration in the USA (years) (mean)	22.0	19.8	18.5

Notes: * Chi-square = 0.01 at 8 d.f. Difference significant at the 95% confidence level.

** ANOVA = (2,809) Difference significant at the 5% confidence level.

1. This group is a sub-sample of the survey population. Latinos could choose either black or white as race.

Table 3 – Patterns of visitation

Variable	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Return visitor</i>	594	88.9	78	76.5	47	82.5	13	12.4	788	87.0
<i>Normal trail visited*</i>	442	72.9	55	62.5	29	58.0	63	61.3	576	71.1
<i>Time of day visiting</i>										
morning	426	63.4	63	61.2	39	67.2	69	65.7	582	63.8
afternoon	240	35.7	35	24.0	21	36.2	35	33.3	317	34.8
evening	143	21.3	23	22.3	11	19.0	19	18.1	192	21.1
<i>Day of week visiting</i>										
weekdays*	187	27.8	16	15.5	6	10.3	29	27.6	234	25.7
weekends	488	72.6	68	66.0	47	81.0	77	73.3	661	72.5
<i>Season most often visiting</i>										
spring	440	65.5	48	46.6	30	51.7	68	64.8	571	62.2
summer	486	72.3	70	68.0	38	65.5	80	76.2	655	71.8
fall*	391	58.2	38	36.9	23	39.7	64	61.0	506	55.5
winter	369	54.9	38	36.9	19	32.8	57	54.2	473	51.9
<i>Number of visits per year</i>										
mean	7.15		6.16		4.72		7.66		7.00	
<i>Group size*</i>										
alone	203	30.3	24	23.3	11	19.0	35	33.7	266	29.3
family	171	25.5	31	30.1	14	24.1	22	21.2	227	25.0
friends	234	34.9	31	30.1	22	37.9	31	29.8	314	34.6
family and friends	34	5.1	13	12.6	7	12.1	11	10.6	62	6.8
religious group	0	0.0	0	0.0	0	0.0	1	1.0	1	0.1
youth club	0	0.0	0	0.0	1	1.7	4	3.8	5	0.6
educational	6	0.9	0	0.0	1	1.7	0	0.0	7	0.8
other organization	21	3.1	4	3.9	1	1.7	0	0.0	25	2.8
other	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
<i>Travel mode</i>										
car, truck, SUV, van	597	88.8	95	92.2	57	98.3	93	88.6	819	89.8
public transportation	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
group transportation	1	0.1	0	0.0	0	0.0	0	0.0	1	0.1
motorcycle / scooter	4	0.6	1	0.1	0	0.0	0	0.0	4	0.4
bicycle	22	3.3	5	4.9	1	1.7	0	0.0	33	3.6
walk / jog	38	5.7	2	1.9	0	0.0	5	4.8	44	4.8
ride horse	8	1.2	0	0.0	0	0.0	1	1.0	9	1.0
other	2	0.3	0	0.0	0	0.0	0	0.0	2	0.2
<i>Mean travel time (minutes)**</i>										
	25.9		34.8		38.6		27.1		27.9	

Notes: *Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

**ANOVA = 0.05 Difference significant at the 95% confidence level.

Table 4 – Reason for visiting the Santa Monica Mountains

Reason	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
exercise	585	87.1	69	67.3	51	87.9	87	82.9	771	84.5
be outdoors	604	89.9	87	84.6	50	86.2	91	86.7	805	88.3
enjoy quiet	458	68.2	60	57.6	38	65.8	66	62.9	603	66.1
fresh air	500	74.4	70	67.3	38	65.5	78	74.3	669	73.4
see wildflowers	264	39.3	29	26.9	15	25.9	40	38.1	342	37.5
see wildlife	335	49.9	39	37.5	21	36.2	46	43.8	430	47.1
enjoy scenery	514	76.5	65	62.5	39	67.2	73	69.5	673	73.8
escape city	379	56.4	48	46.1	32	55.2	47	44.4	493	54.1
experience nature*	360	53.6	46	44.2	27	46.6	44	41.9	465	51.0
solitude	289	43.0	32	30.7	18	31.0	39	37.1	366	40.1
attend event	41	6.1	7	6.7	3	5.2	2	1.9	50	5.5
undertake research	5	0.7	0	0.0	0	0.0	0	0.0	5	0.5
adventure sports	121	18.0	21	20.1	16	27.6	15	14.3	166	18.2
be with pet	98	14.6	9	8.6	6	10.3	16	15.2	126	13.8
socializing	248	36.9	36	33.6	24	41.4	30	28.6	329	36.1
educate children	48	7.1	13	12.5	7	12.1	9	8.6	71	7.8
other	19	2.8	2	3.8	1	1.7	1	1.0	23	2.5

Notes: *Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

Table 5 - Reason for visiting a local park instead of the SMMNRA

Activity	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
limited time*	332	49.4	43	43.2	39	67.2	46	43.8	445	48.8
easier access*	212	31.5	42	40.3	28	48.3	35	33.3	307	33.7
different recreation opportunities	181	26.9	22	21.1	12	20.7	30	28.6	242	26.5
community gardening	10	1.5	4	3.8	1	1.7	2	1.9	16	1.8
group recreation opportunities	54	8.0	15	14.4	4	6.9	4	3.8	73	8.0
see neighborhood friends	50	7.4	9	8.6	3	5.2	11	10.5	71	7.8
easier to take children*	85	12.6	26	25.0	7	12.1	9	8.6	122	13.4
other	26	3.9	4	3.9	0	0.0	2	1.9	111	3.6
not applicable / don't visit	87	12.9	10	9.7	3	5.2	12	11.4	33	12.2

Notes: *Chi-square = 0.05 at 3 df. Difference significant at the 95% confidence level.

Table 6 – Activities of trail users

Activity	White (n=672)		Latino (n=103)		Asian (n=58)		Other (n=105)		Total (n=912)	
	n	%	n	%	n	%	n	%	n	%
hiking	513	76.3	76	73.8	44	75.9	89	84.8	705	77.3
mountain biking	175	26.0	29	28.2	22	37.9	25	23.8	240	26.3
jogging	135	20.1	30	29.1	12	20.7	29	27.8	200	21.9
sightseeing	368	54.8	58	56.3	34	58.6	57	54.3	502	55.0
dog walking*	93	13.8	13	12.5	5	8.6	28	26.7	136	14.9
horse riding	39	5.8	2	1.9	0	0	7	6.7	46	5.0
picnicking*	93	13.8	37	35.9	6	10.3	18	17.1	147	16.1
camping*	38	5.7	19	18.4	12	20.7	14	13.3	78	8.6
rock climbing	45	6.7	17	16.3	5	8.6	10	9.5	74	8.1
bird watching	107	15.9	17	16.3	7	12.1	20	19.0	146	16.0
photography	93	13.8	9	8.7	8	13.8	12	11.4	120	13.2
swimming*	25	3.7	8	7.8	3	5.2	10	9.5	43	4.7
sunbathing	37	5.5	10	9.7	1	1.7	6	5.7	50	5.5
painting / crafts	9	1.3	3	2.8	1	1.7	3	2.9	15	1.6
other	50	8.3	5	4.9	3	5.2	8	7.6	71	7.8

Notes: Percentages add up to more than 100 as visitors could select multiple activities.

*Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

Table 7 – User conflict and problem activities¹

Activity and reason	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Problem activities</i>										
mountain biking	166	24.7	15	14.6	12	20.7	23	21.9	210	23.1
horse riding*	94	14.0	15	14.6	14	24.1	9	8.6	128	14.0
hiking	20	2.9	2	1.9	2	3.4	0	0.0	23	2.6
running / jogging	15	2.2	3	2.9	0	0.0	1	1.0	19	2.1
picnicking	43	6.3	9	8.7	4	6.9	6	5.7	59	6.4
dog walking	123	18.3	17	16.5	17	29.3	22	21.0	174	19.1
other	41	6.1	3	2.9	2	3.4	3	2.9	53	5.8
<i>Reasons why</i>										
damage plants	123	18.3	25	24.0	16	27.6	20	19.0	172	18.9
rude behavior	188	28.0	22	21.1	19	32.8	29	27.4	247	27.1
scare wildlife	119	17.7	16	15.3	10	17.2	24	22.9	162	17.8
startle people	143	21.3	16	15.3	13	22.4	21	20.0	187	20.5
noisy*	109	16.2	16	15.3	15	25.9	10	9.5	140	15.4
litter	145	21.6	20	19.2	17	29.3	23	21.9	194	21.3
scare horses	39	5.8	2	1.9	3	5.2	11	10.5	54	5.9
animal waste*	157	23.4	25	24.0	25	43.1	23	21.9	224	24.6
collision / injury	134	19.9	13	12.5	11	19.0	24	22.9	177	19.4
off leash dogs	12	1.8	1	1.0	0	0.0	2	1.9	15	1.6
other	27	4.0	2	1.9	0	0.0	6	5.7	33	3.6

Notes: *Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

1. Problem activities are those which users rated as having somewhat or strongly negative impacts

Table 8 – Sources of information about park flora and fauna

Information source	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
ranger led walks	71	10.6	8	7.6	6	10.3	8	7.6	89	9.8
school	132	19.6	18	17.3	16	27.6	21	20.0	181	19.8
park brochures	222	33.0	30	28.8	23	39.7	29	27.6	292	32.0
park signs	224	33.3	36	34.6	21	36.2	36	34.3	306	33.6
personal observation	332	49.4	33	31.7	23	39.7	47	44.8	420	46.1
books	278	41.4	33	31.7	28	48.3	43	41.0	368	40.4
magazines*	181	26.9	24	23.0	31	53.4	31	29.5	257	28.2
television	140	20.8	22	21.1	14	24.1	24	22.9	195	21.4
previous visits	259	38.5	24	23.3	19	32.8	33	31.4	326	35.7
family / friends	216	32.1	37	34.6	19	32.8	40	38.1	301	33.0
live in area*	231	34.4	16	15.3	12	20.7	30	28.6	279	30.6
organized groups	42	6.3	9	7.6	3	5.2	10	9.5	61	6.7
internet	11	1.6	1	1.0	3	5.2	1	1.0	15	1.6
other	11	1.6	1	1.0	1	1.7	3	2.9	17	1.9

Notes: *Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

Table 9 – Attitudes towards the Santa Monica Mountains

Reason to protect	White		Latino		Asian		Other		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
provide recreation	151	22.5	27	26.2	11	19.0	17	16.2	201	22.0
provide habitat	361	53.7	55	53.4	30	51.7	53	50.5	485	53.2
both	141	21.0	18	17.5	13	22.4	31	29.5	197	21.6
no opinion*	13	1.9	3	2.8	4	6.9	4	3.8	23	2.5
other	5	0.7	0	0.0	0	0.0	0	0.0	5	0.5

Notes: *Chi-square = 0.05 at 3 d.f. Difference significant at the 95% confidence level.

End Notes

¹ Alienation and dispossession were also features of urban park development, and many poor African-American and Irish working class communities were destroyed or disenfranchised through park creation (Baldwin, 1999; Gandy, 2002; Marne, 2001; Olwig, 2005).

² The area of the park held in public ownership is less than half this size – 63,500 acres, of which 21,500 acres are held by the National Park Service and 42,000 acres are held by California State Parks. The entire unit is managed by the National Park Service.

³ Copies of the instrument are available from:

<http://www.usc.edu/dept/geography/ESPE/publications/trailuse.html>.

⁴ Staff administering the survey used a standardized greeting sheet approved by the National Park Service and the University's Institutional Review Board.

⁵ The survey and estimated time for completion was approved by the Federal Office of Management and Budget in accordance with National Park Service Requirements.

⁶ The choices provided for race were American Indian or Alaska native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, White, and Do not wish to answer. A supplementary question asked participants if they were Hispanic or Latino/a.

⁷ Our limited budget precluded a Spanish version of the survey and the translation resources that this would have necessitated.

⁸ It should be noted that 10.4% of those surveyed did not wish to report household income.

⁹ A high proportion of respondents (17.3%) did not wish to answer the question about race, perhaps indicative of some level of personal disaffection on the part of respondents regarding practices of differentiating between individuals based upon social constructs such as 'race'.

¹⁰ The numbers of visitors from other ethno-racial groups such as African-Americans or Native-Americans was too small to make statistical inferences, so they were combined under a group called 'other'.

¹¹ These numbers add up to more than 100% because respondents could check more than one season.