Nature, race, and parks: past research and future directions for geographic research

Jason Byrne[1]* and Jennifer Wolch[2]

[1]Griffith School of Environment, G31, 3.06 Griffith University, Gold Coast Campus, Queensland, 4222, Australia
[2]College of Environmental Design, University of California, Berkeley, 230 Wurster Hall 1820, Berkeley, CA 94720–1820, USA

Abstract: Geographic research on parks has been wide-ranging but has seldom examined how and why people use parks, leaving these questions to leisure science, which privileges socio-demographic variables over urban socio-spatial explanations (eg, historical, political-economic, and location factors). This article examines recent geographic perspectives on park use, drawing upon environmental justice, cultural landscape, and political ecology paradigms to redirect our attention from park users to a more critical appreciation of the historical, socio-ecological, and political-economic processes that operate through, and in turn shape, park spaces and park-going behaviors. We challenge partial, user-orientated approaches and suggest new directions for geographic research on parks.

Key words: cultural landscape, environmental justice, nature, political ecology, race, urban parks.

I Introduction

> as we produce nature, so do we produce social relations. (Katz and Kirby, 1991: 268)

It is peculiar that geographers, as scholars of the nature-society interface, have not studied parks as extensively as researchers in other disciplines. Parks are rarely innocuous elements of the landscape, especially in cities. Paradoxically described as crime havens, treasured family refuges, and oases for urban residents and wildlife alike, parks vary in size, age, design, ornamental embellishments, planting, facilities, maintenance, and patterns of use. Their constitutive elements – trees, grass, pathways, benches, ponds, fountains, statues, gardens, playgrounds, sporting facilities, etc – reflect diverse ideologies of nature-making. Historically, parks have been idealized as salubrious spaces (Frederick Law Olmsted's 'lungs of city'), as well as places of social interaction and tutelage, inscription of cultural identity and memory, tourist destinations and anchors for property development.

*Email: jason.byrne@griffith.edu.au

All levels of government have been involved in park design and management.

Beyond geography, most scholars have investigated five aspects of parks: (1) the *history and ideology* of parks (eg, McIntire, 1981; Cavett *et al.*, 1982; Cranz, 1982; Rosenzweig and Blackmar, 1992; Maver, 1998; Menéndez, 1998; McInroy, 2000; Lehr, 2001; Gordon, 2002; Cranz and Boland, 2003; 2004); (2) park *access and utilization* (eg, May and Rogerson, 1995; Oguz, 2000; Aminzadeh and Afshar, 2004; Perez-Verdin *et al.*, 2004; McCleave *et al.*, 2006; Oltremari and Jackson, 2006; Pavlikakis and Tsihrintzis, 2006; Schwartz, 2006; Smardon and Faust, 2006); (3) the potential of parks to foster *sustainable urban livelihoods* (eg, Pezzoli, 2000; 2002; Huang *et al.*, 2002; Chiesura, 2004; Pincetl and Gearin, 2005; Domene *et al.*, 2005); (4) the *ecosystem services benefits* of parks (eg, Hough, 1994; Daily, 1997; Bolund and Hunhammar, 1999; Savard *et al.*, 2000; Gobster, 2001; Farber *et al.*, 2002; Hougner *et al.*, 2006); and (5) how parks benefit the *health and well-being* of urban residents (eg, Bedimo-Rung *et al.*, 2005; Frumkin, 2005; Cohen *et al.*, 2007). Especially within leisure research, a frequently investigated topic is how people use parks.

Diverse people use parks in different ways. Leisure researchers typically attribute this to differences in socio-demographic factors such as class, age, gender, and especially race/ethnicity (see Lee, 1972; Hutchison, 1987; West, 1989; Floyd and Shinew, 1999; Gobster, 2002; Payne *et al.*, 2002; Tinsley *et al.*, 2002; Shinew *et al.*, 2004a). Ethno-racial differences in park use have been found in all types of parks (Washburn, 1978; Carr and Williams, 1993; Ewert *et al.*, 1993; Johnson *et al.*, 1998; Tierney *et al.*, 2001; Gobster, 2002). Yet leisure researchers rarely consider how ethno-racial formations might configure park spaces themselves – and how in turn ethno-racially inscribed park spaces may influence park use or non-use. This is a remarkable oversight.

Although it lacks theoretical coherence, geographic research on parks and leisure has been wide-ranging (Coppock, 1982). Geographers have studied multiple aspects of parks, including their history, spatial distribution and accessibility, use patterns and user perceptions, and benefits (eg, Hingston, 1931; Stillwell, 1963; Wolfe, 1964; Ulrich, 1979; Henderson and Wall, 1979; Ulrich and Addoms, 1981; Foresta, 1984; Westover, 1985; Jim, 1989; Lawrence, 1993; Young, 1996; Madge, 1997; Marne, 2001). Recently, drawing on cultural landscape, environmental justice and political ecology paradigms, geographers have begun to weave an integrated research agenda, examining for instance, 'how and why specific nature-culture assemblages like parks are produced' (Whatmore, 2002; Castree, 2003; Braun, 2005), who has access to these diverse culture-natures (Neumann, 1996; Olwig, 1996; 2005; Swyngedouw and Hynen, 2003; Heynen, 2003; 2006; Heynen and Perkins, 2005) and how ethno-racially differentiated park access configures the life chances and livelihoods of urban residents (eg, Brownlow, 2006a; 2006b; Wolch *et al.*, 2005; Byrne *et al.*, 2007).

In this article we explore geographic studies of the spatiality of parks, and park use. Our discussion below is divided into four sections. Taking a cue from Katz and Kirby (1991), Pulido *et al.* (1996), and Brownlow (2006a; 2006b), in section II we examine ideologies of class, race and nature that have historically infused park-making projects. As Loukaitou-Sideris (1995: 89) noted, 'past ideas and values about … parks continue to dominate and determine their present design and programming'. We do not provide a comprehensive history of parks here (see Chadwick, 1966; Cranz, 1978; 1982; Conway, 1991; Lasdun, 1992). Instead we draw upon Foucault's (1977; 1980) genealogical approach to chart the contradictory ideological terrain of 'the park idea' as a socio-natural project (Jones and Wills, 2005), and how park-making ventures have molded

socio-ecological and ethno-racial relations of power within cities.

In section III, we examine explanations for ethno-racially differentiated park utilization, showing that they are apolitical and ahistorical, underpinned by striking Anglo-normativity (Floyd, 1998), grossly generalize ethno-racial differences in park use, and overlook diverse understandings of space and place that have historically configured parks. Parks are not ideologically neutral spaces, nor are they physically homogeneous; rather, they exist for specific ecological, social, political, and economic reasons – reasons that shape how people perceive and use parks.

In section IV, we examine how geographers and others have begun to explore the socio-ecological relations of power invested within nature spaces like parks, offering us fresh insights into ethno-racially differentiated park use (eg, Werry, 2008). Insights from cultural landscape, environmental justice and political ecology studies challenge simplistic notions about how people of color access and use urban greenspace. Results show that differential relations of power and regional racial formations can determine park location, facilities, maintenance, and opportunities for access (eg, Brownlow, 2006b). Prompted by this emerging literature, we propose a conceptual model that posits ethno-racially differentiated park use as emerging from the interplay of historically and culturally contingent contexts of park provision; characteristics of park users; physical and ecological characteristics of park spaces; and how both users and non-users perceive those spaces. In the final section of the article we draw upon this conceptual model to consider how geographic research on parks might advance, and we suggest that new park studies can enhance broader cultural landscape, environmental justice and political ecology perspectives on urban nature-society relations.

II Park studies in geography
Geographers have made numerous contributions to the study of parks, but here we focus on two research themes around park-making as a socio-ecological project: (1) the ideology of park development – especially how parks were created as 'culture-natures' and used as technologies of social control and; (2) how multiple axes of difference (eg, race, class, gender) have historically configured park spaces. We limit our review primarily to park studies in the United States.[1]

1 Parks as elitist 'culture-natures'
The 'park idea' is infused with very specific beliefs about nature. Parks are in essence nature's artifice – elaborate simulacra (Katz and Kirby, 1991; Willems-Braun, 1997). Kenneth Olwig (1996), for example, has traced the etymology of the word *park* to mean 'enclosed' or 'captive' nature, suggesting that urban parks are socially mediated ecologies with deep roots.[2] Parks originate from the aristocratic park and garden landscapes of ancient Greece, India, China, and the Middle East; from European medieval deer parks; and more recently from the elaborately landscaped estates of European gentry (see Wescoat, 1990; Wescoat *et al*., 1991).[3]

The first public parks began with the English aristocracy, who imported the pastoral aesthetic into London by creating residential squares (Lawrence, 1993).[4] They appropriated, privatized, and forcibly enclosed these squares – park-like lands to which peasants (and indirectly the working class) had a traditional form of entitlement (cf. Neumann, 1996). Subsequent conflicts over access to urban greenspace ultimately resulted in the opening of the Royal Parks to the public, and later in the creation of the English public parks – a pattern repeated elsewhere in Europe, and to some extent in the United States (Chadwick, 1966; Lasdun, 1992; Lawrence, 1993; Thompson, 1998; Marne, 2001).

But the impetus for the urban park movement exceeded mere aesthetics. Park reformers in the nineteenth century saw urban parks as medical technologies – Young (2004) calls them biological 'machine[s] to transform

a flawed society' – and as instruments of eco-logical modernization (see also Szczygiel and Hewitt, 2000; Gandy, 2002). Nineteenth-century public health theories postulated that maladies were directly linked to land-scape characteristics – especially wetlands and swamps. Vapors or 'miasmas' around 'low-lying' landscapes were believed to transmit diseases like cholera and typhoid (Driver, 1988; Lawrence, 1993; Szczygiel and Hewitt, 2000), and converting such land to parks was advocated as an effective remedy.

Park reformers shared a deterministic conception of nature (Driver, 1988; Domosh, 1992; Lawrence, 1993; Young, 1996; Taylor, 1999), convinced that social problems had environmental origins. Exposure to the right kind of nature would 'uplift' individuals, mak-ing them healthy, morally proper, socially responsible, economically prudent, and intel-ligent (Cranz, 1978; 1982; Rosenzweig and Blackmar, 1992; Baldwin, 1999; Gagen, 2004), whereas contact with untamed or miasmatic natures invited melancholia and corruption (Driver, 1988; Rosenzweig and Blackmar, 1992; Baldwin, 1999; Szczygiel and Hewitt, 2000). Park reformers thus imbued parks with the power to overcome anarchy, im-morality, crime, and indolence (Boyer, 1978; Schuyler, 1986; Young, 1996; Baldwin, 1999), and parks became in effect both the 'lungs' and 'conscience of the city' (French, 1973; Patmore, 1983).

Tracing the evolution of urban parks in the United States, Young (1995; 1996; 2001; 2004) revealed how parks like Golden Gate Park in San Francisco were progressively transformed as public health theories modernized and park-making discourses shifted first from therapeutic to 'democratic' concerns and then, with the 1930s burgeoning recreation movement, to effectiveness and efficiency concerns. Park space became functionally segregated into playgrounds, museums, outdoor concert venues, and public garden spaces and increased in complexity.[5] Social mixing, moral uplift and physical fitness (both of individual bodies and how those

bodies 'fit' within society) became principal roles of parks (Cranz, 1978; 1982; Schuyler, 1986; Rosenzweig and Blackmar, 1992; Schenker, 1996; Gagen, 2004). But social control remained the primary impetus behind park-making (Katz and Kirby, 1991; Taylor, 1999; Brownlow, 2006b).

For example, the United States' first public park-makers – Frederick Law Olmstead, Calvert Vaux, and their European contem-poraries – argued that, by increasing contact between the classes, parks would foster democratic inclusiveness (Rosenzweig and Blackmar, 1992). Yet, despite the rhetoric, industrial-age parks in England were rarely democratic spaces (Marne, 2001). The urban poor and ethnic minorities initially con-tested many English park-making projects – a situation that also occurred across the Atlantic. Tensions eventually escalated to the extent that in several American parks, including Lincoln Park in Chicago and Griffith Park in Los Angeles, 'race riots' erupted, spilling out from parks into surrounding neighborhoods (The Chicago Commission on Race Relations, 1922; French, 1973; Tuttle, 1996; Davis, 2002). Rather than 'melting pots', many parks became 'pressure cookers' (Loukaitou-Sideris, 1995).

2 Spaces of exclusion: class and race in the park
American park-makers radically altered urban ecologies. They used new industrial technologies to excavate rock, sculpt soil, relocate trees, fill wetlands, dam streams, and create lakes (Chadwick, 1966). In so doing, they displaced flora, fauna, and people, and introduced a vast array of new species to fashion the 'urban pastoral' (Gandy, 2002; see also Spirn, 1984, 1996; Bischoff, 1994).[6] Gandy's (2002) work on New York's Central Park shows how the urban pastoral ideal im-pacted the livelihoods and well-being of the city's poorest and most vulnerable residents (see also Rosenzweig and Blackmar, 1992).

Observing that Central Park was con-ceived as a microcosm of Jeffersonian pastoral values – family, nature, and social bonds – Gandy

argues that the park was designed to impart civilizing sensibilities and enact elitist ideals of morality and refinement, creating a binary 'moral geography'. Park makers constructed the park's image as natural, sanctifying, wholesome, and White, counterposing it against a city construed as artificial, profane, insalubrious, and colored (see also Driver, 1988; Domosh, 1992; Matless, 1997; 1998; Baldwin, 1999). Park making thus led to gentrification of blighted areas of the industrial city, displacing vulnerable residents, many of whom were poor and people of color (Schuyler, 1986; Rosenzweig and Blackmar, 1992; Baldwin, 1999; Taylor, 1999).[7] African-American and Irish families, for example, were evicted from Seneca Village when it was razed to create Central Park. Like other early parks, Central Park was far from public transportation and beyond walking distance from working-class tenements (Schuyler, 1986; Rosenzweig and Blackmar, 1992; Young, 1995).[8]

When public parks later became more accessible to a diverse clientele, park managers imposed strict behavioral rules and dress codes to inculcate cultural norms of the elite within working-class and immigrant visitors (Rosenzweig and Blackmar, 1992; Cosgrove, 1995; Thompson, 1998; Taylor, 1999). Park rules and park design constrained how such groups used early parks (Schuyler, 1986; Rosenzweig and Blackmar, 1992; Schenker, 1996; Baldwin, 1999; Taylor, 1999). Moreover, many US parks were even racially segregated. McKay (1954: 703) asserted that 'racial differences [were] more pronounced in [parks] than in any other [spaces]'.

In many Southern states, for example, Jim Crow ideologies led to racially segregated park systems, sometimes with separate park administrators (Washington, 1928; McKay, 1954; Taylor, 1956; Shearer, 1999; Weyeneth, 2005). In Louisiana, Mississippi, and Texas, state park facilities were off limits to people of color, and in some states (eg, Louisiana) the practice of racially segregating parks continued through the 1950s (Taylor, 1956).

Despite the segregationist doctrine of 'separate but equal' facilities for African-Americans, parks created for Blacks were smaller, received less funding, and had fewer facilities than those for Whites (Meyer, 1942; McKay, 1954; Shearer, 1999). Such parks were typically located on the outskirts of town on land ill suited for other development (Baldwin, 1999; Foster, 1999; Shearer, 1999). While not legally segregated, many northern and mid-western cities also had separate parks for Whites and African-Americans, with people of color confined to a park-deprived urban core while Whites enjoyed a park-abundant suburban periphery (Kraus, 1969). Within parks, swimming pools and beaches in these cities, discrimination was commonplace and often informally sanctioned by civic officials, even where racial segregation was illegal (Rabkin, 1954; Byrne *et al.*, 2007).

The exclusion of the poor and people of color was also a hallmark of the US national park system; these parks were founded upon middle- and upper-class sensibilities and eugenicist ideologies about pristine wilderness (Mels, 2002: 137–38). Wilderness ideals were complicit in the dispossession of Native Americans from land designated for national parks (Cosgrove, 1995; Spence, 1999), legitimized through quasi-scientific discourses of custodianship and stewardship (Chase, 1987; Spence, 1999). National parks, like zoos and agricultural shows, were spatially codified as distinctively 'White natures' (Anderson, 2003). For instance, Cosgrove (1995) linked the emergence of the US national park movement to efforts to create a White nation with abundant natural capital, compensating for the perceived lack of Europe's cultural sophistication (see also Neumann, 1996; Grusin, 1998; Spence, 1999). National parks also 'represented the kind of environment in which earlier – and racially purer – immigrants were believed to have forged American identity' (Cosgrove, 1995: 35).

Geographic studies of park-making as a socio-natural project reveal that, historically, many parks were ideologically charged spaces.

Yet few geographers have studied the questions of who uses contemporary parks and for what purposes. Leisure researchers dominate the literature on park use in the United States, and they have found that people of color visit parks at lower rates than their White counterparts and use parks differently. What is surprising, though, given the ideologies of park-making in the USA, is that leisure researchers frame explanations for ethno-racially differentiated park use not as a function of park spaces, but simply as a function of the characteristics and preferences of park users.

III Ethno-racially differentiated park use

People visit parks for a wide variety of reasons, including tourism, recreation, exercise, relaxation, education, encountering nature, spirituality, self-expression, socializing, being with companion animals, escaping the city, and for solitude, personal development, and to earn a living (Hayward, 1989; McIntyre *et al.*, 1991; Loukaitou-Sideris, 1995; Manning and More, 2002). People also visit parks for illicit reasons – from the prosaic to the potentially dangerous – including homelessness, voyeurism, exhibitionism, sexual gratification, drug use, thievery, etc (McDonald and Newcomer, 1973; Kornblum, 1983). Park activities are diverse, spanning both active recreation – eg, walking (with companion animals), hiking, swimming, riding bicycles, running, jogging, and playing sports; and passive recreation – eg, sunbathing, picnicking, painting, fishing, photography, reading, dancing, playing with children or animals, playing musical instruments, studying nature, and people-watching (Hayward, 1989). Although rites of passage occur in parks too (eg, weddings, funerals, and birthday parties) they are rarely mentioned in the literature (Loukaitou-Sideris, 1995, and Gobster, 2002, are notable exceptions). Importantly, many of these activities seem to be differentiated by race, ethnicity, and nativity.

1 Variations by race, ethnicity, and nativity

Leisure researchers find that various ethno-racial groups exhibit distinct preferences for leisure settings, have diverse reasons for visiting parks, and favor different activities (for detailed reviews, see Husbands and Idahosa, 1995; Floyd, 2001).[9] African-Americans reputedly enjoy more sociable, formal, sports-orientated, urban park settings, whereas Whites are said to focus on individualism and apparently prefer settings that offer secluded nature (Washburn, 1978; Hutchison, 1987; Taylor, 1989; Talbot and Kaplan, 1993; Johnson *et al.*, 1998; Floyd and Shinew, 1999; Virden and Walker, 1999; Tierney *et al.*, 2001; Gobster, 2002; Payne *et al.*, 2002; Ho *et al.*, 2005).[10] Asians appear to value 'scenic beauty' over recreational functionality (Gobster, 2002; Payne *et al.*, 2002; Ho *et al.*, 2005), whereas Latinos are said to desire 'a more developed environment' with good access to group facilities such as parking, picnic tables and restrooms (Baas *et al.*, 1993: 526; see also Hutchison, 1987; Irwin *et al.*, 1990).

Reasons for visiting parks also seem to vary by race/ethnicity. Several studies suggest that Whites may seek solitude and opportunities to exercise, African-Americans look for organized recreation opportunities, Latinos seek to socialize, typically with extended family groups, and also to enjoy 'fresh air', and Asians apparently favor park visits with extended family or organized groups, but also visit parks to escape social responsibilities and to exercise (Hutchison, 1987; Floyd *et al.*, 1994; Scott and Munson, 1994; Dwyer, 1997; Philipp, 1997; Gobster, 2002; Payne *et al.*, 2002; Ho *et al.*, 2005; Sasidharan *et al.*, 2005). But there are exceptions. Although Tierney *et al.* (2001: 275) noted that African-Americans are significantly less likely than other ethno-racial groups to visit natural areas like parks, Johnson *et al.* (1998) suggested this was not the case for African-Americans from rural areas.

With respect to park activities, Latinos putatively tend to engage in sedentary and

informal social activities such as picnicking, but also enjoy soccer, camping, and hiking (Hutchison, 1987; Baas *et al.*, 1993; Gobster, 2002; Sasidharan *et al.*, 2005). African-Americans seem to enjoy sport and organized recreation like basketball, but also sitting, talking, and walking (McGuire *et al.*, 1987; Floyd *et al.*, 1994; Dwyer, 1997; Payne *et al.*, 2002; Shinew *et al.*, 2004a; Sasidharan *et al.*, 2005). Whites disproportionately appear to enjoy camping, hiking, hunting, boating, swimming, cycling, and dog-walking (Baas *et al.*, 1993; Floyd *et al.*, 1994; Gobster, 2002). Studies of Asians emphasize preferences for strolling/walking, picnicking, fishing, volleyball, and golf (Dwyer, 1997; Gobster, 2002; Payne *et al.*, 2002; Shinew *et al.*, 2004a; Sasidharan *et al.*, 2005).[11]

Researchers have also found that nativity may also influence park visitation and use. For example, Baas *et al.* (1993) found that Hispanics born in Mexico preferred clean, litter-free areas, whereas the native-born Latinos emphasized the importance of park safety.[12] Shaull and Gramann (1998) found that first- and second-generation Hispanic-Americans derived more family- and nature-related leisure benefits from parks than Whites or third-generation Hispanic-Americans.

These empirical findings beg the question: '*why* do different groups visit and use parks in different ways?' Within leisure research, the answers to this question revolve around the positionalities and cultural preferences of individual potential park users, rather than the characteristics of parks themselves.

2 Race/ethnicity park use theories and their limitations

Leisure theorists have advanced four interconnected explanations for ethno-racially differentiated park use: (1) marginality; (2) race/ethnicity; (3) assimilation and acculturation; and (4) discrimination. According to marginality theory, people of color face socio-economic barriers that constrain when and how they visit and use parks (Washburn, 1978). For example, they may be transit-dependent, thus limiting access to parks near

public transport routes or within easy walking distance of their homes (Scott and Munson, 1994). Lower incomes may relegate people of color to neighborhoods where parks may be scarce (see, for example, Hutchison, 1987; Woodard, 1988; Floyd *et al.*, 1993; Johnson, 1998; Johnson *et al.*, 1998; Floyd, 1999; Lee *et al.*, 2001), and high entry fees may prevent some from accessing certain parks (Scott and Munson, 1994; More and Stevens, 2000; More, 2002).

Ethnicity theory asserts that people of color have distinctive 'subcultural styles', developed over successive generations, and these account for observed differences in leisure preferences and activities (Washburn, 1978). For example, some researchers suggest African-Americans and Latinos may be threatened by wild nature (Floyd *et al.*, 1995; Virden and Walker, 1999) and prefer less management and law enforcement in parks (Gobster, 2002) due to their cultural backgrounds. In contrast, acculturation/assimilation explanations posit that people of color use parks differently because of their ethno-racial heritage and/or because they have not adjusted to or adopted the dominant values of mainstream society (Washburn, 1978; Hutchison, 1987; Woodard, 1988; Baas *et al.*, 1993; Floyd *et al.*, 1994; Johnson *et al.*, 1998; Shaull and Gramann, 1998; Tarrant and Cordell, 1999; Payne *et al.*, 2002; Ho *et al.*, 2005). Theorists expect that over time newer groups will adopt the culture, behavior, and norms of more dominant social groups (Floyd *et al.*, 1993).

Discrimination may also explain ethno-racially differentiated park use. To paraphrase West (1989: 12–13): 'prejudice and overt discrimination in public parks together with perceived hostility lead people of color to avoid parks where they feel unwelcome' (see also Lee, 1972; Meeker *et al.*, 1973; Floyd *et al.*, 1993; 1994; Philipp, 1997; 1999; Floyd, 1998; Stodolska and Jackson, 1998; Hester *et al.*, 1999; Virden and Walker, 1999; Tierney *et al.*, 2001; Floyd and Johnson, 2002; Gobster, 2002). When people of color experience discrimination in parks they may avoid using

those parks or more generally alter how they use parks. Some who subscribe to this explanation suggest that changing the composition of park management staff to include more 'minority' representation will increase park use rates among people of color.

But all of these explanations are problematic. The marginality hypothesis privileges class, factoring in race only through past oppression (Floyd, 1998), failing to recognize how racism still functions as a vehicle of socio-economic domination (see Hall, 1980). Ethnicity theory often confounds race and ethnicity, conflates ethnicity with subculture, and/or regards 'subcultural variations' as a form of self-imposed differentiation (Hutchison, 1988; Floyd, 1998). The theory also essentializes and naturalizes race, and ignores within-group variations in custom, language, behavior, and norms etc.[13] The assimilation/acculturation theory suffers from Anglo-normativity, predicated on the assumption that 'assimilation [is] inevitable and desirable' (Floyd, 1999). Moreover, by ignoring racial oppression, often resulting in barriers to park access, this explanation misses how race shapes space.

Even the discrimination perspective has its faults. Proponents have tended to treat instances of discrimination in isolation, rather than as part of a social system based on racial oppression. For example, although Shinew *et al*. (2004a: 196), in their study of Chicago park users, found that: 'parks and other public spaces tend to be color coded … reflect[ing] a racialized social order', they attributed this predominantly to sociological factors. Indeed, many exponents have failed to see how histories of racism might shape contemporary park design and use (Loukaitou-Sideris, 1995; Floyd, 1999). For instance, Hutchison (1987: 212, 220) observed 'blacks in black parks, Hispanics in Hispanic parks and whites in white parks' yet overlooked the reasons for such racial differentiation (see West, 1989: 12). Similarly, Gobster (1998) found racial segregation in Lincoln Park, Chicago, but did not explicitly connect leisure preferences and experiences of discrimination with racial

segregation. And, despite findings that people of color travel further than Whites to visit many parks (eg, Gobster, 2002; Payne *et al*., 2002), the role of racial segregation in residential location and park access has mostly been overlooked.

Thus, despite a long tradition of exploring ethno-racial differences in park use, most leisure studies have underestimated or simply ignored the spatial effects of systemic racism (Noe and Snow, 1989/90; Tierney *et al*., 2001). And leisure scholars tend to treat parks as homogeneous entities – vessels for human interaction, providing few insights into why for example, some parks attract certain people and repel others, or why some park users perceive certain park spaces as the territory of particular ethno-racial group(s), thus constraining their park use choices (eg, Lee, 1972; Gray, 1973; National Park Service, 1975; Kornblum, 1983; West, 1989; Johnson *et al*., 1998; Gobster, 2002; Shinew *et al*., 2004a). Although some leisure researchers have begun to engage with space (eg, Kornblum, 1983; Loukaitou-Sideris, 1995), focusing upon notions of 'territoriality' or 'place attachment', these concepts remain peripheral and are poorly developed (eg, Payne *et al*., 2002; Stokowski, 2002; Williams, 2002; Moore and Scott, 2004; Brooks *et al*., 2006). The challenge for geographers is how to reconceptualize ethno-racially differentiated park use to include space and place.

IV Reconceptualizing park use and accessibility

What we require is a conceptual model that incorporates the insights of leisure scholars with those of geographers – essentially a spatially explicit understanding of park use.[14] Drawing on the cultural landscape, environmental justice and political ecology perspectives, we offer a model that seeks to explain park use as reliant on, but more than just a function of an individual's socio-demographic characteristics. This model of park use incorporates four elements: (1) the socio-demographic characteristics of park

users and non-users – as suggested by leisure research; (2) the political ecology and amenities of the park itself – eg, landscape design, vegetation, and facilities, features of surrounding neighborhoods and land uses, management regime; (3) the historical and cultural landscapes of park provision – such as discriminatory land-use practices, philosophy of park design, or politics of development; and (4) individual perceptions of park spaces – eg, accessibility, safety, conviviality, or sense of welcome, all mediated by personal characteristics, and the park's political ecology, history, and cultural landscape (see Figure 1). Together, these forces tend to produce spatially uneven development of park resources and access, typically to the detriment of communities of color and disadvantage, and thus disproportionately affecting their health and well-being.

Park use is closely associated with the pool of *potential park users*. Many socio-demographic variables influence park use, including age, sex, race, ethnicity, and household composition, as well as socio-economic factors such as education, income levels, disability, and home ownership. Other user-centered variables also potentially influence park use, including residential location, physical mobility (eg, car-ownership), time resources (eg, working poor), attitudes towards nature, and leisure preferences. For example, Niepoth (1973) suggested that, among other factors, physical fitness, age, income, time, knowledge/awareness, and skills are important correlates of park use.

The *park space* component of our conceptual framework emphasizes the importance of variables such as lighting, vegetation, topography, drainage, fencing, signage, and maintenance, and the character of nearby neighborhoods – together with ambient characteristics like temperature and precipitation – as potential determinants of park use (Fletcher, 1983; Burgess *et al.*, 1988; Floyd *et al.*, 1994; Flynn *et al.*, 1994; Loukaitou-Sideris, 1995;
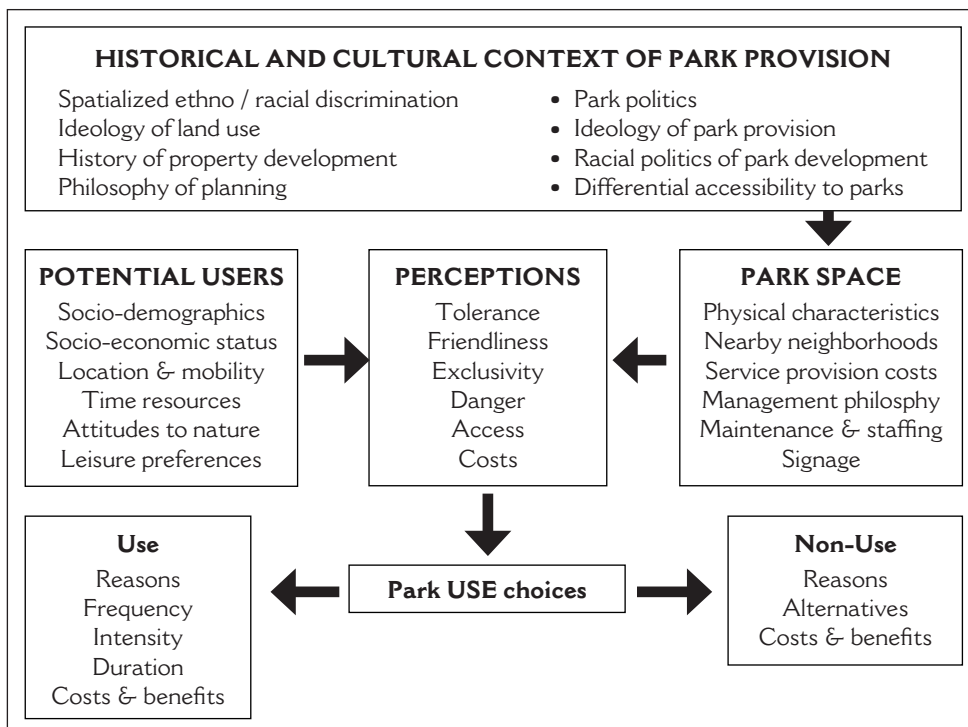

Figure 1   Space, race and park use

Ruddick, 1996; Gobster, 1998; 2002; Philipp, 1999; Bonaiuto et al., 1999; Steg and Sievers, 2000; Loukaitou-Sideris and Stieglitz, 2002; Whitzman, 2002; Burger, 2003; Perez-Verdin et al., 2004). For example, Hayward (1989) found that potential users of Boston's Franklin Park reported that because they lacked information about park facilities, etc, they did not use some areas of the park; Scott and Munson (1994: 87) reported similar findings. Signs and rules may codify Anglo-normativity; 'soccer prohibited' signs might reflect both a shortage of park space and racially based attitudes about who belongs and what constitutes appropriate use of park space (Martin, 2004).

Both park user characteristics and park features may affect *perceptions of parks* and the people who use those spaces, among potential users. Parks may be perceived as welcoming, safe, and accessible, or intolerant of difference, for example, thereby influencing use patterns. The same park may also be perceived differently by different people, depending on their backgrounds (see Gollege and Stimson, 1997). Following Sibley (1999), people of color may perceive some urban parks as for 'Whites only' or feel apprehensive about visiting certain park destinations because they must traverse space that is mostly White, and thus potentially hostile (eg, Gould and White, 1986; Lee, 1972; Meeker et al., 1973; West, 1993). Perceptions of danger or discomfort may be linked to lower levels of utilization of urban public spaces like parks (Loukaitou-Sideris, 1995; Hester et al., 1999; Ravenscroft and Markwell, 2000; Rishbeth, 2001; Loukaitou-Sideris and Stieglitz, 2002). Westover (1985) and Madge (1997) have emphasized how perception mediates potential park users' attitudes towards park safety, feelings of belonging and notions of incivility. If people are going to use parks – especially the socially disadvantaged – parks must be seen as safe, welcoming, well maintained, physically appealing, catering for a range of activities, and fostering social interaction (eg, French, 1973; Gray, 1973;

McDonald and Newcomer, 1973). Perceived expense may also influence park use, irrespective of actual entrance fees or other costs. And the presence of park security, law enforcement personnel or rangers can influence perceptions of safety or belonging – both positively and negatively (see Rishbeth, 2001).

Park design may also impact how people perceive and thus use them. The cultural landscape perspective reveals that most American parks have been designed according to Anglo-Celtic landscape aesthetics – ie, language of park signage, layout of the park space, landscaping (Gold, 1986; Baas et al., 1993; Rishbeth, 2001; Bedimo-Rung et al., 2005), which may not attract foreign-born visitors (Loukaitou-Sideris, 1995; Loukaitou-Sideris and Stieglitz, 2002). Diverse park visitors may also perceive park landscaping characteristics (eg, type of vegetation or density of planting) as being unwelcoming or even potentially hostile and unsafe, while park design features themselves may mirror cultural and ethno-racial ideologies about the appropriate appearance and use of space. Nast (2006) also contends that the presence of dogs in parks may negatively influence park perceptions and use among people of color.

Our conceptual framework recognizes the overarching *historical and cultural context of park provision* and its role in shaping park supply and the character of parks – in particular, the history of racial prejudice that has been central to park-making projects in many American cities, a history reflected in inequitable patterns of park provision (Gobster, 1998; 2002; Virden and Walker, 1999). Larger parks offering more recreational opportunities are often found in predominantly White neighborhoods, reflecting patterns of racialized suburbanization (Hurley, 1995), while park use choices among people of color may reflect deeply ingrained fears of racial harassment based on historical and/or lived experience (Ravenscroft and Markwell, 2000; Rishbeth, 2001; see also Shinew et al., 2004b).

The racial ideology of park provision may significantly affect both the character of

park landscapes and how potential users perceive them. Cultural landscape analysis reveals that racial ideologies are mobilized and instantiated within urban landscapes such as parks through symbolic and material coordinates, ranging from park signs to police beatings (eg, Anderson, 1987; 2002; Cosgrove, 1995; Kenny, 1995; Nash, 1996; Kobayashi and Peake, 2000; Bender, 2001; Mahtani, 2001; Peake and Ray, 2001; Endfield and Nash, 2002; Anderson, 2003; Eves, 2005). Greenspaces, for example, can become racialized over time, with 'outsider' racial groups coming to be seen as being out of place in natural areas (Katz and Kirby, 1991; Nash, 1996; Rose *et al.*, 1997).

The racial politics of park development reflects ideologies of land use, histories of property development, planning philosophy, and the spatial expression of racial discrimination. Racialization may occur through the legal and symbolic inscription of space, for example land titles, restrictive covenants, zoning, and redlining, and representational registers such as postcards, advertising, color schemes, street trees, murals, and architectural embellishments (Power, 1983; Nickel, 1997; Schein, 1997; Delaney, 1998; 2001; 2002; Ross and Leigh, 2000; Gotham, 2000; Lands, 2004). For example, Duncan and Duncan (2003) examined landscape production in suburban New York and found that, although Latinos are needed to maintain the aestheticized nature of the suburban pastoral, they are excluded from many of the rights, privileges, and benefits enjoyed by White residents. These include affordable housing, access to shopping, places of worship and rights to use some public spaces. The result is a racialization of landscapes, including parks and open space.

The attributes of potential park users, park users' perceptions, and racialized park landscapes embedded within their historical and cultural context may influence *park use choices*. Some residents may decide to use parks, others will not. *Park use* patterns – frequency, duration, intensity, etc – may vary

systematically based on many of the factors already identified and also due to idiosyncratic factors such as personal motivation and perceived benefits and costs of use in light of alternatives. However, the historical, socio-ecological, and racialized context within which parks and parks users are embedded may result in *non-use*, or avoidance of parks altogether, with a concomitant substitution of alternative venues for recreation and leisure.

What is critically important to recognize is that, despite their deployment as technologies of social control and tutelage, parks can nonetheless benefit urban residents in very real ways (for a detailed discussion, see Driver *et al.*, 1991). Research across many fields demonstrates that park use can:

- mitigate sedentary lifestyles associated with obesity, coronary heart disease and several types of cancer (eg, Orsega-Smith *et al.*, 2004; Bedimo-Rung *et al.*, 2005; Ho *et al.*, 2005), speed recovery for patients recuperating from surgery, and assuage anxiety (Kaplan, 2001; Kuo, 2001; Kleiber *et al.*, 2002; de Vries *et al.*, 2003; Maller *et al.*, 2005);
- improve mental health by providing psychological relief from the stresses of city life (Ulrich, 1979; 1984; Ulrich and Addoms, 1981; Ulrich *et al.*, 1990; 1991; Kaplan, 2001; Kuo, 2001; Kaplan *et al.*, 2004; Orsega-Smith *et al.*, 2004; Hung and Crompton, 2006);
- enhance food security and access to quality food, since community gardens are a recent feature of many inner-city parks (Nuru and Konschink, 2000; Barnett, 2001; Tittle, 2002; Maller *et al.*, 2005; Swanson, 2005; Blair-Lewis *et al.*, 2005);
- increase property values, improve socialization, promote child development, and mitigate incivility (Gray, 1973; Mitchell, 1995; Harnik, 2000; Crewe, 2001; Gobster, 2001; Manning and More, 2002; Pincetl, 2003; Aminzadeh and Afshar, 2004; Jones and Wills, 2005; Mitchell and Staeheli, 2005; Heynen, 2006); and

• provide ecosystem services benefits, including regulation of ambient temperatures, air filtration, noise reduction, habitat provision and protection of biodiversity, carbon sequestration, and stormwater infiltration (see Burgess *et al*., 1988; McIntyre *et al*., 1991; Bolund and Hunhammar, 1999; Swanwick *et al*., 2003; Heynen, 2006).

Yet the uneven development of park space means that these multiple benefits of parks are not equally accessible. People of color are especially likely to encounter problems in accessing parks, and this has emerged as a compelling environmental justice issue (eg, Wolch *et al*., 2005; Byrne *et al*., 2007). Homeless people, the poor, and other groups (such as skateboarding youth) are often systematically excluded from urban parks, while others are deterred due to lack of easy access or negative perceptions linked to park history, associations, and attributes (Mitchell, 1995; Smith, 2002; Mitchell and Staeheli, 2005; Brownlow, 2006a; 2006b; Byrne *et al*, 2007).

For example, in Los Angeles' low-income neighborhoods and those dominated by people of color, African-Americans and Latinos have dramatically lower levels of access to park resources than predominantly White suburban areas of the city. Moreover, the suburban periphery is bolstered by new parks and receives more park funding than the park-deprived core (Wolch *et al*., 2005). And the nation's largest urban national park, parts of which lie just 8 miles from downtown Los Angeles, is surrounded by White neighborhoods that may act as a barrier to people of color wishing to access this park (Byrne *et al*., 2009). Thus many people of color may be systematically denied access to the multiple benefits that parks confer upon their users, with consequent negative impacts upon community health and well-being.

Our conceptual model, rooted in environmental justice, political ecology, and cultural landscape approaches, provides fertile terrain for new geographic research on parks and their uneven development. Following Robbins (2004: 216), who argues that it is imperative that we trace 'flows … of garbage, trees, energy, runoff, and disease through built urban space' – to see who wins and who loses in the spatial and political-economic allocation of environmental harms and benefits – we raise a number of questions for future geographic research on parks.

For instance, do cultural norms and values, experiences of racial hostility and histories of paternalistic park design affect the way women of color perceive and use certain parks (eg, Madge, 1997; Nies *et al*., 1999; Eyler *et al*., 2002)? The interactions between race, gender, and perceptions of safety may configure recreational activities and shape access to park spaces in ways that are poorly understood (Fletcher, 1983; Westover, 1985; Ruddick, 1996; Koskela, 1999). Recent political ecology analyses of parks indicate that gender can play a major role in delimiting access to urban greenspace and reveal that multiple axes of difference can exacerbate environmental injustice. Fusions of gender, class, and race can seriously diminish access to environmental goods and services like parks (Swyngedouw, 1996; Huang *et al*., 2002; Pezzoli, 2002; Heynen, 2003; 2006; Heynen and Perkins, 2005). For example, Brownlow (2006a; 2006b), in his analysis of Fairmont Park in Philadelphia, illustrates how women of color became especially vulnerable to attack in parks. Interactions between vulnerability, violence, and neoliberal reforms to park management reduced operating budgets and park maintenance, promoted weed infestation and vegetation densification – particularly adjoining neighborhoods of color (see also Valentine, 1991; Madge, 1997; Whitzman, 2002) – and resulted in dramatic increases in violent crimes against women.[15]

Another set of questions concern the potential role played by historical patterns of racism in shaping the contemporary

distribution of parks and recreation facilities in urban areas. Such patterns are not static and may interact with non-park-related opportunities such as movie theaters, fast-food hang-outs, video game arcades, or shopping centres to influence park-use propensities. Do they also differentially affect park use in racially distinct neighborhoods (eg, Smith, 1980; Fesenmaier and Lieber, 1985; Scott and Munson, 1994)? Some differences may arise due to information constraints. We know very little about how potential park users obtain information about local park opportunities – for example, whether they circulate unevenly and through different channels. Tierney *et al*. (2001) suggest they do, noting that Latinos rely more on social networks to get access about urban wildlands in Los Angeles than do Whites, and may be constrained as a result (also see Spotts and Stynes, 1985). While we know that park attributes may shape park use, the extent to which they differentially impact potential user groups is largely unknown, as is the extent of uneven access to specific park facilities designed for recreation and play – another potential environmental justice concern.

Such work is critical if we are to understand the extent of inequitable access to urban greenspace. But geographers also need to investigate new configurations of environmental injustice. For instance, climate change has recently emerged as an environmental justice concern (Adger and Kelly, 1999; Adger, 2001; Patz *et al*., 2005; Mendelsohn *et al*., 2006). How will traditionally park-deprived communities fare under anticipated climate-change impacts? Will people of color who already lack access to parks in their neighborhoods suffer from compounded difficulties though increased heat-island effects and be denied relief that parks offer if available park-space is distant, dangerous or exclusionary? Or will policy-makers be mobilized by climate-change threats and grassroots pressure to create new greenspace in underserved areas?

Last, park users are agents and can leave their own imprints on parklands. But little geographic research explores activism around urban parks, especially by those marginalized by virtue of racial, gender, or class disadvantage. What role, for example, are people of color playing in reshaping their access to active recreation areas and urban nature? Recent research by Byrne *et al*. (2007) on the history of inner-city park supply and funding in Los Angeles shows that long-term political, cultural, and economic contestations over nature and its benefits may produce ethno-racial differentials in park access and use. Although earlier park developments were influenced by the conviction that parks could quell civil unrest and gang activities and simultaneously rejuvenate urban nature, plans for park expansion prompted the community to mobilize around alternative park visions. These questions and more remain open for geographers to explore.

V Conclusion

Park histories, ideologies, and ecologies arise within a complex urban recreational landscape. Parks have historically functioned as spaces of social control – disciplining working-class and racialized bodies, and redirecting ethno-racial and class tensions. Explanations of park use from leisure studies (as well as public health) lack historical specificity and do not account for the spatiality of parks.

Although geographic literature on how people use parks is relatively scarce, there are encouraging signs that this is beginning to change and that geographers have begun to address this conceptual and empirical gap. One of the most significant trends is geographers' recognition that parks are urban spaces with considerable potential to offset the social and environmental problems facing cities in the new millennium. Geographers also have been at the forefront of studies examining public space and the various factors affecting people's perceptions of belonging and meaning in the urban environment.

As cities are recast as socio-natural spaces whose ecologies matter, geographers are well positioned to make a significant contribution to future research on the socio-ecological role of urban parks, and have begun to take up this challenge.

By studying parks, geographers can also refine our understanding of broader nature-society relations. The environmental justice, cultural landscape, and political ecology literatures, in particular, have highlighted problems associated with urban parks, especially the public health and ecological consequences of the uneven spatial distribution of greenspace within cities. But, although these perspectives have much to offer each other, few geographers have attempted to harness them together (along with findings from leisure research) to sharpen theoretical insights on nature-society relations. For example, political ecology and related literatures are strong on structures and institutions but downplay individual agency. But, drawing on leisure research, recent studies of parks have broadened the political ecology approach to show that individuals often play a major role in structuring how communities access nature and its benefits, and are changing how we conceptualize the spatial distribution of vulnerability and environmental injustice. Some of these same studies (eg, Pulido, 2000) have also broadened our understanding of environmental injustice itself. Others have shifted our gaze away from exposure to harm to include inequities in access to environmental amenities and ecosystem services, thus enriching how we understand the spatial distribution of environmental risks and benefits. Finally, the cultural landscape perspective shows us how landscapes can become racialized, shifting the scale of environmental injustice from the home, the factory or the neighborhood to entire landscapes, thus reorientating and broadening our ambitions for just environmental outcomes in the city.

Notes

1. We recognize that park-making as a colonial project is important (Driver, 1988; Cosgrove, 1995; Kenny, 1995; Neumann, 1996; Endfield and Nash, 2002; Eves, 2005), but these considerations lie beyond the scope of our paper.
2. This definition is problematic because it encompasses ant farms, window boxes, and swimming pools. But the definitional slipperiness of the park concept shows us how these recreational spaces should not be taken for granted.
3. Geographer Ellen Churchill Semple (1929) was one of the first to consider the *nature* of parks. Her examination of ancient Mediterranean parks and gardens was richly descriptive, detailing complex social ecologies. Semple linked park-making with the cultural practices of urban elites.
4. Parks in the United States – including commons, squares, pleasure grounds, and public parks – trace their heritage to European antecedents, with the exception of the national park, a uniquely American invention.
5. Sociologist Galen Cranz (1982) noted that parks eventually evolved into four main types based on their function – pleasure ground, reform park, recreation facility, and open space system. Each had distinctive attributes promoting specific activities (eg, pleasure gardens promoted social intercourse whereas recreation facilities fostered physical exercise). Recently, ecological parks have joined the typology.
6. Deer parks were especially influential: nobles who forcibly displaced peasants from traditional farmlands to create their hunting estates bequeathed a distinctive 'nature' aesthetic – scattered copses of large trees (sheltering deer from the elements) underlain by grassy meadows (launds, ie, lawn), a bucolic nature that nineteenth-century park makers sought to emulate (Taylor, 2004).

7. People of color were also excluded from working on many park development projects (Rosenzweig and Blackmar, 1992).

8. Early fares for public transportation were beyond the means of many working-class residents (Baldwin, 1999; DeBlasio, 2001).

9. There is much confusion within the leisure studies literature about the differences between race and ethnicity. We distinguish between the two on the basis that ethnicity refers to putative socio-cultural distinctiveness between populations – ie, food preferences, norms and mores, religion, music, clothing, etc, whereas race is a construct focusing on purported physiognomic distinctiveness – hair, skin color, facial features, etc. Like Omi and Winant (1994), we affirm that there is no biological basis to race.

10. Johnson *et al*. (1998) found that in rural areas African-Americans prefer hunting and fishing and poor African-Americans visit forests in greater numbers than poor Whites.

11. Gobster (2002) noted that there are large within-group differences, which he attributes to ethnicity/nationality.

12. Hispanic is a US census category that refers to Spanish-speaking people who originate from or have Latin-American ancestry (eg, Mexico, Puerto-Rico, Guatemala, El Salvador). People are classed by the US Census Bureau as White or Black Hispanic. Latino is a self-identifying ethno-racial category comprised of Spanish-speaking people who originate from, identify with, or possess Central and South American ancestry.

13. On a positive note, some proponents of this perspective recognize that constructs like 'Latino' are problematic; as Carr and Williams (1993) stated, 'there is no "Hispanic monolith" using the forests'.

14. Conceptual frames from leisure research as well as public health lack historical specificity, focus on park users, have limited conceptualizations of race, and only superficially consider space and place (see Gomez, 2002).

15. In contrast, studies in wildland settings have shown how the black male body may be branded as inherently dangerous and 'out of place' (see Burgess *et al*., 1988; Loukaitou-Sideris, 1995; Madge, 1997; Hester *et al*., 1999; Ravenscroft and Markwell, 2000; Nicholls, 2001; Rishbeth, 2001; Loukaitou-Sideris and Stieglitz, 2002; Smoyer-Tomic *et al*., 2004).

References

Adger, W.N. 2001: Scales of governance and environmental justice for adaptation and mitigation of climate change. *Journal of International Development* 13, 921–31.

Adger, W.N. and **Kelly, P.M.** 1999: Social vulnerability to climate change and the architecture of entitlements. *Mitigation and Adaptation Strategies for Global Change* 4, 253–66.

Aminzadeh, B. and **Afshar, D.** 2004: Urban parks and addiction. *Journal of Urban Design* 9, 73–87.

Anderson, K. 1987: The idea of Chinatown: the power of place and institutional practice in the making of a racial category. *Annals of the Association of American Geographers* 77, 580–98.

— 2002: The racialization of difference: enlarging the story field. *Professional Geographer* 54, 25–30.

— 2003: White natures: Sydney's royal agricultural show in post-humanist perspective. *Transactions of the Institute of British Geographers* NS 28, 422–41.

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, 523–29.

Baldwin, P.C. 1999: *Domesticating the street: the reform of public space in Hartford, 1850–1930*. Columbus, OH: Ohio State University Press.

Barnett, H. 2001: The Chinatown cornfields: including environmental benefits in environmental justice studies. *Critical Planning* 8, 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, 159–68.

Bender, B. 2001: Introduction. In Bender, B. and Winer, M., editors, *Contested landscapes: movement, exile and place,* Oxford: Berg Press, 1–18.

Bischoff, A. 1994: Rethinking the urban park: rediscovering urban solutions. In Platt, R.H., Rowntree, R.A. and Muick, P.C., editors, *The eco-logical city: preserving and restoring urban biodiversity,* Amherst, MA: University of Massachusetts Press, 203–13.

Blair-Lewis, L.V., Sloane, D.C., Nascimento, L.M. and **Diaman, A.L.** 2005: African Americans' access to healthy food options in South Los Angeles restaurants. *American Journal of Public Health* 95, 668–73.

Bolund, P. and **Hunhammar, S.** 1999: Ecosystem services in urban areas. *Ecological Economics* 29, 293–301.

Bonaiuto, M., Aiello, A., Perugini, M., Bonnes, M. and **Ercolani, A.P.** 1999: Multidimensional perception of residential environment quality and neighborhood attachment in the urban environment. *Journal of Environmental Psychology* 19, 331–52.

Boyer, P. 1978: *Urban masses and moral order in America, 1820–1920*. Cambridge, MA: Harvard University Press.

Braun, B. 2005: Environmental issues: writing a more-than-human urban geography. *Progress in Human Geography* 29, 635–50.

Brooks, J.J., Wallace, G.N. and **Williams, D.R.** 2006: Place as a relationship partner: an alternative metaphor for understanding the quality of visitor experience in a backcountry setting. *Leisure Sciences* 28, 331–49.

Brownlow, A. 2006a: Inherited fragmentations and narratives of environmental control in entrepreneurial Philadelphia. In Heynen, N., Swyngedouw, E. and Kaika, M., editors, *In the nature of cities,* New York: Routledge, 208–25.

— 2006b: An archaeology of fear and environmental change in Philadelphia. *Geoforum* 37, 227–45.

Burger, J. 2003: Perceptions about environmental use and future restoration of an urban estuary. *Journal of Environmental Planning and Management* 46, 399–416.

Burgess, J., Harrisson, 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, 455–73.

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* 12, 153–81.

Byrne, J., Wolch, J. and **Zhang, J.** 2009: Planning for environmental justice in an urban national park. *Journal of Environmental Planning and Management* 52, 1–28.

Carr, D.S. and **Williams, D.R.** 1993: Understanding the role of ethnicity in outdoor recreation experiences. *Journal of Leisure Research* 25, 22–38.

Castree, N. 2003: Commodifying what nature? *Progress in Human Geography* 27, 273–97.

Cavett, M.E., Selwood, H.J. and **Lehr, J.C.** 1982: Social philosophy and the development of Winnipeg's public parks. *Urban History Review* 11, 27–39.

Chadwick, G.F. 1966: *The park and the town: public landscape in the 19th and 20th centuries*. New York: Frederick A. Praeger.

Chase, A. 1987: *Playing God in Yellowstone: the destruction of America's first national parks*. San Diego, CA: Harcourt Brace Jovanovich.

Chiesura, A. 2004: The role of urban parks for the sustainable city. *Landscape and Urban Planning* 68, 129–38.

Cohen, D., McKenzie, T., Sehgal, A., Williamson, S., Golinelli, D. and **Lurie, N.** 2007: Contribution of parks to physical activity. *American Journal of Public Health* 97, 509–14.

Conway, H. 1991: *People's parks: the design and development of Victorian parks in Britain*. Cambridge: Cambridge University Press.

Coppock, J.T. 1982: Geographical contributions to the study of leisure. *Leisure Sciences* 1, 1–27.

Cosgrove, D. 1995: Habitable earth: wilderness, empire and race in America. In Rothenberg, D., editor, *Wild ideas,* Minneapolis, MN: University of Minnesota Press, 27–41.

Cranz, G. 1978: Changing roles of urban parks: from pleasure gardens to open space. *Landscape* 22/23, 9–18.

— 1982: *The politics of park design: a history of urban parks in America*. Cambridge, MA: Harvard University Press.

Cranz, G. and **Boland, M.** 2003: The ecological park as an emerging type. *Places* 15, 44–47.

— 2004: Defining the sustainable park: a fifth model for urban parks. *Landscape Journal* 23, 102–20.

Crewe, K. 2001: Linear parks and urban neighborhoods: a study of the crime impact of the Boston south west corridor. *Journal of Urban Design* 6, 245–64.

Daily, G.C. 1997: *Nature's services: societal dependence on natural ecosystems*. Washington, DC: Island Press.

Davis, M. 2002: *Dead cities: and other tales*. New York: The New Press.

DeBlasio, D. 2001: The immigrant and the trolley park in Youngstown, Ohio, 1899–1945. *Rethinking History* 5, 75–91.

Delaney, D. 1998: *Race, place and the law, 1836-1948*. Austin, TX: University of Texas Press.

— 2001: Making nature/marking humans: law as a site of (cultural) production. *Annals of the Association of American Geographers* 91, 487–503.

— 2002: The space that race makes. *The Professional Geographer* 54, 6–14.

de Vries, S., Verheij, R.A., Groenewegen, P.P. and **Spreeuwenberg, P.** 2003: Natural environments – healthy environments? An exploratory analysis of the relationship between greenspace and health. *Environment and Planning A* 35, 1717–31.

Domene, E., Saurí, D. and **Parés, M.** 2005: Urbanization and sustainable resource use: the case of garden watering in the metropolitan region of Barcelona. *Urban Geography* 26, 520–35.

Domosh, M. 1992: Controlling urban form: the development of Boston's back bay. *Journal of Historical Geography* 18, 288–306.

Driver, B.L., Brown, P.J. and **Peterson, G.L.**, editors 1991: *Benefits of leisure*. State College, PA: Venture.

Driver, F. 1988: Moral geographies: social science and the urban environment in mid-nineteenth century England. *Transactions of the Institute of British Geographers* NS 13, 275–87.

Duncan, J. and **Duncan, N.** 2003: Can't live with them; can't landscape without them: racism and the pastoral aesthetic in suburban New York. *Landscape Journal* 22, 88–98.

Dwyer, O.J. 1997: Geographical research about African-Americans: a survey of journals, 1911–1995. *The Professional Geographer* 49, 441–50.

Endfield, G.H. and **Nash, D.J.** 2002: Missionaries and morals: climatic discourse in nineteenth-century central Southern Africa. *Annals of the Association of American Geographers* 92, 727–42.

Eves, R. 2005: Unsettling settler colonialism: debates over climate and colonization in new guinea, 1875–1914. *Ethnic and Racial Studies* 28, 304–30.

Ewert, A.W., Chavez, D.J. and **Magill, A.W.**, editors 1993: *Culture, conflict and communications at the wildlands-urban interface*. Boulder, CO: Westview Press.

Eyler, A.A., Matson-Koffman, D., Vest, J.R., Evenson, K.R., Sanderson, B., Thompson, J.L., Wilbur, J. and **Wilcox, S.** 2002: Environmental, policy and cultural factors related to physical activity in a diverse sample of women: the women's cardiovascular health network project – summary and discussion. *Women in Health* 36, 123–34.

Farber, S., Costanza, R. and **Wilson, M.A.** 2002: Economic and ecological concepts for valuing ecosystem services. *Ecological Economics* 41, 375–92.

Fesenmaier, D.R. and **Lieber, S.R.** 1985: Spatial structure and behavior response in outdoor recreation participation. *Geografiska Annaler B* 67, 131–38.

Fletcher, J.E. 1983: Assessing the impact of actual and perceived safety and security problems on park use and enjoyment. *Journal of Park and Recreation Administration* 1, 21–36.

Floyd, M.F. 1998: Getting beyond marginality and ethnicity: the challenge for race and ethnic studies in leisure research. *Journal of Leisure Research* 30, 3–22.

— 1999: Race, ethnicity and use of the national park system. *Social Science Research Review* 1, 1–24.

— 2001: Managing parks in a multicultural society: searching for common ground. *Managing Recreation Use* 18, 41–51.

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, 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, 359–84.

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, 83–98.

Floyd, M.F., Outley, C.W., Bixler, R.D. and **Hammitt, W.E.** 1995: Effects of race, environmental preference and negative affect on recreation preferences. In National Recreation and Park Association, editor, *Abstracts from the 1995 national recreation and park symposium on leisure research,* Arlington, VA: National Recreation and Park Association.

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, 158–73.

Flynn, J., Slovic, P. and **Mertz, C.K.** 1994: Gender, race and perception of environmental health risks. *Risk Analysis* 14, 1101–108.

Foresta, R. 1984: America's urban national parks. *Urbanism Past and Present* 18, 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, 130–49.

Foucault, M. 1977: *Discipline and punish: the birth of the prison*. London: Allen Lane.

— 1980: Two lectures: truth and power. In Gordon, C., editor, *Power/knowledge: selected interviews and other writings, 1972–1977,* New York: Pantheon Books, 78–108.

French, J.S. 1973: The decline and deterioration of the American city park. In Gray, D. and Pelegrino, D.A., editors, *Reflections on the recreation and park movement,* Dubuque, IA: W.C. Brown Company, 225–29.

Frumkin, H. 2005: Health, equity and the built environment. *Environmental Health Perspectives* 113(5), A290–291.

Gagen, E.A. 2004: Making America flesh: physicality and nationhood in early twentieth-century education reform. *Cultural Geographies* 11, 417–42.

Gandy, M. 2002: *Concrete and clay: reworking nature in New York City*. Cambridge, MA: The MIT Press.

Gobster, P.H. 1998: Urban parks as green walls or green magnets? Interracial relations in neighborhood boundary parks. *Landscape and Urban Planning* 41, 43–55.

— 2001: Visions of nature: conflict and compatibility in urban park restoration. *Landscape and Urban Planning* 56, 35–51.

— 2002: Managing urban parks for racially and ethnically diverse clientele. *Leisure Sciences* 24, 143–59.

Gold, S.M. 1986: User characteristics and response to vegetation in neighborhood parks. *Arboricultural Journal* 10, 275–87.

Gollege, R.G. and **Stimson, R.J.** 1997: *Spatial behavior: a geographic perspective*. New York: Guilford Press.

Gomez, E. 2002: The ethnicity of public recreation participation model. *Leisure Sciences* 23, 21–34.

Gordon, D.L.A. 2002: Frederick G. Todd and the origins of the park system in Canada's capital. *Journal of Planning History* 1, 29–57.

Gotham, K.F. 2000: Urban space, restrictive covenants and the origins of racial residential segregation in a US city, 1900–1950. *International Journal of Urban and Regional Research* 24, 616–33.

Gould, P. and **White, R.** 1986: *Mental maps*. Boston, MA: Allen and Unwin.

Gray, D.E. 1973: The un-hostile park. In Gray, D. and Pelegrino, D.A., editors, *Reflections on the recreation and park movement,* Dubuque, IA: W.C. Brown Company, 235–38.

Grusin, R. 1998: Reproducing Yosemite: Olmstead, environmentalism and the nature of aesthetic agency. *Cultural Studies* 12, 332–59.

Hall, S. 1980: Race, articulation and societies structured in dominance. In *Sociological theories: race and colonialism,* Paris: UNESCO, 305–45.

Harnik, P. 2000: *Inside city parks*. Washington, DC: The Urban Land Institute.

Hayward, J. 1989: Urban parks: research, planning and social change. In Altman, I. and Zube, E., editors, *Public places and spaces,* New York: Plenum Press, 193–216.

Henderson, H. and Wall, G. 1979: Accessibility to urban open space. In Wall, G., editor, *Recreational land use in southern Ontario,* Waterloo: Department of Geography, University of Waterloo, 34–60.

Hester, R.T. Jr, Blazej, N.J. and Moore, I.S. 1999: Whose wild? Resolving cultural and biological diversity conflicts in urban wilderness. *Landscape Journal* 18, 137–46.

Heynen, N. 2003: The scalar production of injustice within the urban forest. *Antipode* 35, 980–98.

— 2006: Green urban political ecologies: toward a better understanding of inner-city environmental change. *Environment and Planning A* 38, 499–516.

Heynen, N. and Perkins, H.A. 2005: Scalar dialectics in green: urban private property and the contradictions of the neoliberalization of nature. *Capitalism, Nature, Socialism* 16, 99–113.

Hingston, R.W.G. 1931: Proposed British national parks for Africa. *Geographical Journal* 77, 401–22.

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, 281–306.

Hough, M. 1994: Design with city nature. In Platt, R.H., Rowntree, R.A. and Muick, P.C., editors, *The ecological city: preserving and restoring urban biodiversity,* Amherst, MA: University of Massachusetts Press, 40–48.

Hougner, C., Colding, J. and Söderqvist, T. 2006: Economic valuation of a seed dispersal service in the Stockholm national urban park, Sweden. *Ecological Economics* 59, 364–74.

Huang, H., Hsiao, M. and Liu, H.-J. 2002: Collective action toward a sustainable city. In Evans, P., editor, *Livable cities: urban struggles for livelihood and sustainability,* Berkeley, CA: University of California Press, 67–94.

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, 291–311.

Hurley, A. 1995: *Environmental inequalities and industrial pollution in Gary, Indiana, 1945–1980*. Chapel Hill, NC: University of North Carolina Press.

Husbands, W. and Idahosa, P. 1995: Ethnicity and recreation behavior: a review and critique of the literature. *Canadian Ethnic Studies* 27, 84–98.

Hutchison, R. 1987: Ethnicity and urban recreation: whites, blacks and Hispanics in Chicago's public parks. *Journal of Leisure Research* 19, 205–22.

Hutchison, R. 1988: A critique of race, ethnicity, and social class in recent leisure-recreation research. *Journal of Leisure Research* 20, 10–30.

Irwin, P.N., Gartner, W.C. and Phelps, C.C. 1990: Mexican-American/Anglo cultural differences as recreation style determinants. *Leisure Sciences* 12, 335–48.

Jim, C.Y. 1989: Changing patterns of country-park recreation in Hong Kong. *Geographical Journal* 155, 167–78.

Johnson, C.Y. 1998: A consideration of collective memory in African American attachment to wildland recreation places. *Human Ecology Review* 5, 5–15.

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, 101–20.

Jones, K.R. and Wills, J. 2005: *The invention of the park: from the garden of Eden to Disney's magic kingdom*. Cambridge: Polity Press.

Kaplan, R. 2001: The nature of the view from home: psychological benefits. *Environment and Behavior* 33, 507–42.

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, 300–12.

Katz, C. and Kirby, A. 1991: In the nature of things: the environment and everyday life. *Transactions of the Institute of British Geographers* NS 16, 259–71.

Kenny, J.T. 1995: Climate, race, and imperial authority: the symbolic landscape of the British hill station in India. *Annals of the Association of American Geographers* 85, 694–714.

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, 219–35.

Kobayashi, A. and Peake, L. 2000: Racism out of place: thoughts on whiteness and an antiracist geography in the new millennium. *Annals of the Association of American Geographers* 90, 392–403.

Kornblum, W. 1983: Racial and cultural groups on the beach. *Ethnic Groups* 5, 109–24.

Koskela, H. 1999: 'gendered exclusions': women's fear of violence and changing relations to space. *Geografiska Annaler B* 81, 111–24.

Kraus, R. 1969: Providing for recreation and aesthetic enjoyment. *Proceedings of the Academy of Political Science,* 29, 90–102.

Kuo, F.E. 2001: Coping with poverty: impacts of environment and attention in the inner city. *Environment and Behavior* 33, 5–34.

Lands, L.B. 2004: A reprehensible and unfriendly act: homeowners, renters and the bid for residential segregation in Atlanta, 1900–1917. *Journal of Planning History* 3, 83–115.

Lasdun, S. 1992: *The English park: royal, private and public*. New York: The Vendrome Press.

Lawrence, H.W. 1993: The greening of the squares of London: transformation of urban landscapes and ideals. *Annals of the Association of American Geographers* 83, 90–118.

Lee, J., Scott, D. and **Floyd, M.F.** 2001: Structural inequalities in outdoor recreation participation: a multiple hierarchy perspective. *Journal of Leisure Research* 33, 427–49.

Lee, R.G. 1972: The social definition of outdoor recreation places. In Burch, W.R., Cheek, N. and Taylor, L., editors, *Social behavior, natural resources and environment,* New York: Harper Row, 68–84.

Lehr, J.C. 2001: The origins and development of Manitoba's provincial park system. *Prairie Forum* 2, 241–56.

Loukaitou-Sideris, A. 1995: Urban form and social context: cultural differentiation in the uses of urban parks. *Journal of Planning Education and Research* 14, 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, 467–88.

Madge, C. 1997: Public parks and the geography of fear. *Tijdschrift voor Economische en Sociale Geografie* 88, 237–50.

Mahtani, M. 2001: Racial remappings: the potential of paradoxical space. *Gender, Place and Culture* 8, 299–305.

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, 45–54.

Manning, R. and **More, T.** 2002: Recreational values of public parks. *The George Wright Forum* 19, 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, 421–43.

Martin, D.C. 2004: Apartheid in the great outdoors: American advertising and the reproduction of a racialized outdoor leisure identity. *Journal of Leisure Research* 36, 513–35.

Matless, D. 1997: Moral geographies of English landscape. *Landscape Research* 22, 141–55.

— 1998: *Landscape and Englishness*. London: Reaktion Books.

Maver, I. 1998: Glasgow's public parks and the community, 1850–1914; a case study in Scottish civic interventionism. *Urban History* 25, 323–47.

May, J. and **Rogerson, C.M.** 1995: Poverty and sustainable cities in south Africa: the role of urban cultivation. *Habitat International* 19, 165–81.

McCleave, J., Espiner, S. and **Booth, K.** 2006: The New Zealand people-park relationship: an exploratory model. *Society and natural Resources* 19, 547–61.

McDonald, A.D. and **Newcomer, R.J.** 1973: Differences in the perception of a city park as a supportive or threatening environment. In Gray, D. and Pelegrino, D.A., editors, *Reflections on the recreation and park movement,* Dubuque, IA: W.C. Brown Company, 256–61.

McGuire, F.A., O'Leary, J.T., Alexander, P.B. and **Dottavio, F.D.** 1987: A comparison of outdoor recreation preferences and constraints of black and white elderly. *Activities, Adaptation and Aging* 9.

McInroy, N. 2000: Urban regeneration and public space: the story of an urban park. *Space and Polity* 4, 23–40.

McIntire, E. 1981: The un-making of a park concept. *Transition: The Quarterly Journal of Socially and Ethically Responsible Geographers* 11, 7–12.

McIntyre, N., Cuskelly, G. and **Auld, C.** 1991: The benefits of urban parks: a market segmentation approach. *Australian Parks and Recreation* 27, 11–18.

McKay, R.B. 1954: Segregation and public recreation. *Virginia Law Review* 40, 697–731.

Meeker, J.W., Woods, W.K. and **Lucas, W.** 1973: Red, white and black in the national parks. *The North American Review* Fall, 3–7.

Mels, T. 2002: Nature, home, and scenery: the official spatialities of Swedish national parks. *Environment and Planning D: Society and Space* 20, 135–54.

Mendelsohn, R., Dinar, A. and **Williams, L.** 2006: The distributional impacts of climate change on rich and poor countries. *Environment and Development Economics* 11, 159–78.

Menéndez, J.F.R. 1998: Nature and the city: the Parque del Oeste and the expansion of nineteenth-century Madrid. *Urban History* 25, 189–210.

Meyer, H. D. 1942: A preview of community recreation. *Social Forces* 20, 357–63.

Mitchell, D. 1995: The end of public space? People's park, definitions of the public, and democracy. *Annals of the Association of American Geographers* 85, 108–33.

Mitchell, D. and **Staeheli, L.A.** 2005: Turning social relations into space: Property, law and the plaza of Santa Fe, New Mexico. *Landscape Research* 30, 361–78.

Moore, R.L. and **Scott, D.** 2004: Place attachment and context: comparing a park and a trail within. *Forest Science* 48, 877–84.

More, T.A. 2002: The marginal user as the justification for public recreation: a rejoinder to Compton, Driver and Dustin. *Journal of Leisure Research* 34, 103–18.

More, T. and **Stevens, T.** 2000: Do user fees exclude low-income people from resource-based recreation? *Journal of Leisure Research* 32, 341–57.

Nash, C. 1996: Reclaiming vision: looking at landscape and the body. *Gender, Place and Culture* 3, 149–69.

Nast, H.J. 2006: Puptowns and wiggly fields: Chicago and the racialization of pet-love in the twenty-first century. In Schein, R.H., editor, *Landscape and race in the United States,* New York: Routledge.

National Park Service 1975: *Gateway national recreation area. Special study: the 1974 summer season.* New York: National Park Service.

Neumann, R.P. 1996: Dukes, earls and ersatz evens: aristocratic nature preservationists in colonial Africa. *Environment and Planning D: Society and Space* 14, 79–98.

Nicholls, S. 2001: Measuring the accessibility and equity of public parks: a case study using GIS. *Managing Leisure* 6, 201–19.

Nickel, J.W. 1997: The liberty dimension of historic and contemporary segregation. *Law and Philosophy* 16, 259–77.

Niepoth, W. 1973: Users and non-users of recreation and park services. In Gray, D. and Pelegrino, D.A., editors, *Reflections on the recreation and park movement,* Dubuque, IA: W.C. Brown Company, 131–42.

Nies, M.A., Vollman, M. and **Cook, T.** 1999: African-American women's experiences with physical activity in their daily lives. *Public Health Nursing* 16, 23–31.

Noe, F.P. and **Snow, R.** 1989/90: Hispanic cultural influence on environmental concern. *Journal of Environmental Education* 21, 27–34.

Nuru, M. and **Konschink, K.** 2000: Taking the lead in building community: San Francisco league of urban gardeners. *Race, Poverty and the Environment* 7, 50–51.

Oguz, D. 2000: User survey's of Ankara's urban parks. *Landscape and Urban Planning* 52, 165–71.

Oltremari, J.V. and **Jackson, R.G.** 2006: Conflicts, perceptions, and expectations of indigenous communities associated with natural areas in Chile. *Natural Areas Journal* 26, 215–20.

Olwig, K.R. 1996: Reinventing common nature: Yosemite and mount Rushmore – a meandering tale of double nature. In Cronon, W., editor, *Uncommon ground: rethinking the human place in nature,* New York: W.W. Norton and Company, 379–408.

— 2005: Representation and alienation in the political land-*scape*. *Cultural Geographies* 12, 19–40.

Omi, M. and **Winant, H.** 1994: *Racial formation in the United States: from the 1960s to the 1990s.* New York: Routledge.

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, 232–56.

Patmore, J.A. 1983: *Recreation and resources: leisure patterns and leisure places.* Oxford: Blackwell.

Patz, J.A., Campbell-Lendrum, D., Holloway, T. and **Foley, J.A.** 2005: Impact of regional climate change on human health. *Nature* 438, 310–17.

Pavlikakis, G.E. and **Tsihrintzis, V.A.** 2006: Perceptions and preferences of the local population in eastern Macedonia and thrice national park in Greece. *Landscape and Urban Planning* 77, 1–16.

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, 181–98.

Peake, L. and **Ray, B.** 2001: Racializing the Canadian landscape: whiteness, uneven geographies and social justice. *The Canadian Geographer* 45, 180–86.

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, 897–910.

Pezzoli, K. 2000: *Human settlements and planning for ecological sustainability.* Cambridge, MA: The MIT Press.

— 2002: Sustainability, livelihood and community mobilization in the Ajusco 'Ecological Reserve'. In Evans, P., editor, *Livable cities: urban struggles for livelihood and sustainability,* Berkeley, CA: University of California Press, 195–221.

Philipp, S.F. 1997: Race, gender and leisure benefits. *Leisure Sciences* 19, 191–207.

— 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.

Pincetl, S. 2003: Non-profits and park provision in Los Angeles: an exploration of the rise of governance approaches to the provision of local services. *Social Science Quarterly* 84, 979–1001.

Pincetl, S. and **Gearin, E.** 2005: The reinvention of public green space. *Urban Geography* 26, 365–84.

Power, G. 1983: Apartheid Baltimore style: the residential segregation ordinances of 1910–1913. *Maryland Law Review* 42, 289–330.

Pulido, L. 2000: Rethinking environmental racism: white privilege and urban development in Southern California. *Annals of the Association of American Geographers* 90, 12–40.

Pulido, L., Sidawi, S. and **Vos, R.O.** 1996: An archaeology of environmental racism in Los Angeles. *Urban Geography* 17, 419–39.

Rabkin, S. 1954: Racial desegregation in places of public accommodation. *The Journal of Negro Education,* 23, 249–61.

Ravenscroft, N. and **Markwell, S.** 2000: Ethnicity and the integration and exclusion of young people through urban park and recreation provision. *Managing Leisure* 5, 135–50.

Rishbeth, C. 2001: Ethnic minority groups and the design of public open space: an inclusive landscape? *Landscape Research* 26, 351–66.

Robbins, P. 2004: *Political ecology: a critical introduction.* Malden, MA: Blackwell.

Rocheleau, D., Thomas-Slayter, B. and **Wangari, E.,** editors 1996: *Feminist political ecology: global issues and local experiences*. London: Routledge.

Rose, G., Kinnaird, V., Morris, M. and **Nash, C.** 1997: Feminist geographies of environment, nature and landscape. In Women in Geography Specialty Group, editor, *Feminist geographies: explorations in diversity and difference,* Harlow: Longman, 146–90.

Rosenzweig, R. and **Blackmar, E.** 1992: *The park and the people*. Ithaca, NY: Cornell University Press.

Ross, C.L. and **Leigh, N.G.** 2000: Planning, urban revitalization, and the inner city: an exploration of structural racism. *Journal of Planning Literature* 14, 367–80.

Ruddick, S. 1996: Constructing difference in public spaces: race, class, and gender as interlocking systems. *Urban Geography* 17, 132–51.

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, 19–38.

Savard, J.-P., Clergeau, P. and **Mennechez, G.** 2000: Biodiversity concepts and urban ecosystems. *Landscape and Urban Planning* 48, 131–42.

Schein, R.H. 1997: The place of landscape: a conceptual framework for interpreting an American scene. *Annals of the Association of American Geographers* 87, 660–80.

Schenker, H.M. 1996: Women's and children's quarters in golden gate park, San Francisco. *Gender, Place and Culture* 3, 293–308.

Schuyler, D. 1986: *The new urban landscape: the re-definition of city form in nineteenth-century America*. Baltimore, MD: The Johns Hopkins University Press.

Schwartz, K.Z.S. 2006: 'Masters in our native place': the politics of Latvian national parks on the road from communism to 'Europe'. *Political Geography* 25, 42–71.

Scott, D. and **Munson, W.** 1994: Perceived constraints to park usage among individuals with low incomes. *Journal of Park and Recreation Administration* 12, 79–96.

Semple, E.C. 1929: Irrigation and reclamation in the ancient Mediterranean region. *Annals of the Association of American Geographers* 19(3), 111–48.

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, 47–63.

Shearer, B.L.J. 1999: The daily aesthetic: a multimedia exploration of leisure and recreation in Lexington's segregated urban park system. Thesis, Department of Geography, University of Kentucky.

Shinew, K.J., Floyd, M.F. and **Parry, D.** 2004a: Understanding the relationship between race and leisure activities and constraints: exploring an alternative framework. *Leisure Sciences* 26, 181–99.

Shinew, K.J., Glover, T.D. and **Parry, D.C.** 2004b: Leisure spaces as potential sites for interracial interaction: community gardens in urban areas. *Journal of Leisure Research* 36, 336–55.

Sibley, D. 1999: Creating geographies of difference. In Massey, D., Allen, J. and Sarre, P., editors, *Human geography today,* Cambridge: Polity Press, 115–28.

Smardon, R.C. and **Faust, B.B.** 2006: Introduction: international policy in the biosphere reserves of Mexico's Yucatan peninsula. *Landscape and Urban Planning* 74, 160–92.

Smith, N. 2002: After Tompkins Square Park: degentrification and the revanchist city. In Watson, S. and Bridge, G., editors, *The Blackwell City Reader*, Oxford: Wiley-Blackwell, 279–89.

Smith, S.L.J. 1980: Intervening opportunities and travel to urban recreation centers. *Journal of Leisure Research* 12, 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, 287–302.

Spence, M.D. 1999: *Dispossessing the wilderness: Indian removal and the making of national parks*. New York: Oxford University Press.

Spirn, A.W. 1984: *The granite garden*. New York: Bison Books.

— 1996: Constructing nature: the legacy of Frederick Law Olmstead. In Cronon, W., editor, *Uncommon ground: rethinking the human place in nature,* New York: W.W. Norton and Company, 91–113.

Spotts, D.M. and **Stynes, D.J.** 1985: Measuring the public's familiarity with recreation areas. *Journal of Leisure Research* 17, 253–65.

Steg, L. and **Sievers, I.** 2000: Cultural theory and individual perceptions of environmental risks. *Environment and Behavior* 32, 250–69.

Stillwell, H.D. 1963: National parks of Brazil: a study in recreational geography. *Annals of the Association of American Geographers* 53, 391–406.

Stodolska, M. and **Jackson, E.L.** 1998: Discrimination in leisure and work experienced by a white ethnic minority group. *Journal of Leisure Research* 30, 23–46.

Stokowski, P.A. 2002: Languages of place and discourses of power: constructing new senses of place. *Journal of Leisure Research* 34, 368–82.

Swanson, D.K. 2005: Parks for all people. *The Trust for Public Land Newsletter* Fall/Winter, 1–3.

Swanwick, C., Dunnett, N. and **Woolley, H.** 2003: Nature, role and value of green space in towns and cities: an overview. *Built Environment* 29, 94–106.

Swyngedouw, E. 1996: The city as a hybrid: on nature, society and cyborg urbanization. *Capitalism, Nature, Socialism* 7, 65–80.

Swyngedouw, E. and **Hynen, N.** 2003: Urban political ecology, justice and the politics of scale. *Antipode* 35, 898–918.

Szczygiel, B. and **Hewitt, R.** 2000: Nineteenth-century medical landscapes: John H. Rauch, Frederick Law Olmsted, and the search for salubrity. *Bulletin of Historical Medicine* 74, 708–34.

Talbot, J.F. and **Kaplan, R.** 1993: Preferences for nearby natural settings: ethnic and age variations. In Gobster, P., editor, *Managing urban and high-use recreation settings,* St. Paul, MN: US Department of Agriculture, Forest Service, 93–97.

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, 18–34.

Taylor, A. 2004: 'Pig-sticking princes': royal hunting, moral outrage, and the republican opposition to animal abuse in nineteenth and early twentieth-century Britain. *History* 89, 30–48.

Taylor, D.E. 1989: Blacks and the environment: towards an explanation of the concern and action gap between blacks and whites. *Environment and Behavior* 21, 175–205.

— 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, 420–77.

Taylor, J.T. 1956: Desegregation in Louisiana – 1956. *The Journal of Negro Education* 25, 262–72.

The Chicago Commission on Race Relations 1922: *The Negro in Chicago: a study of race relations and a race riot*. Chicago: University of Chicago Press.

Thompson, K.W. 1998: Historic American parks and contemporary needs. *Landscape Journal* 17, 1–23.

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, 271–77.

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, 199–218.

Tittle, D. 2002: *A walk in the park: Greater Cleveland's new and reclaimed green spaces*. Athens, OH: Ohio University Press.

Tuttle, W.M. Jr 1996: *Race riot: Chicago in the red summer of 1919*. Urbana, IL: University of Illinois Press.

Ulrich, R.S. 1979: Visual landscapes and psychological well-being. *Landscape Research* 4, 17–23.

— 1984: View through a window may influence recovery from surgery. *Science* 224, 420–21.

Ulrich, R.S. and **Addoms, D.L.** 1981: Psychological and recreational benefits of a residential park. *Journal of Leisure Research* 13, 43–65.

Ulrich, R.S., Dimberg, U. and **Driver, B.L.** 1990: Psychophysiological indicators of leisure consequences. *Journal of Leisure Research* 22, 154–66.

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, 201–30.

Valentine, G. 1991: Women's fear and the design of public space. *Built Environment* 16, 288–303.

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, 219–39.

Washburn, R.F. 1978: Black underparticipation in wildland recreation: alternative explanations. *Leisure Sciences* 2, 201–10.

Washington, F.B. 1928: Recreation facilities for the Negro. *Annals of the American Academy of Political and Social Science*, 140, 272–82.

Werry, M. 2008: Tourism, race and the state of nature: on the bio-poetics of government. *Cultural Studies* 22, 391–411.

Wescoat, J.L. 1990: Gardens of invention and exile, the precarious context of Mughal garden design during the rein of Humayun (1530–1556). *Journal of Garden History* 10, 106–16.

Wescoat, J.L., Brand. M, and **Naeem, M** 1991: Gardens, roads and legendary tunnels: the underground memory of Mughal Lahore. *Journal of Historical Geography* 17, 1–17.

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, 11–28.

— 1993: The tyranny of metaphor: interracial relations, minority recreation, and the wildlands-urban interface. In Ewert, A., Chavez, D.J. and Magill, A.W., editors, *Culture, conflict and communication in the wildlands-urban interface,* Boulder, CO: Westview Press, 109–15.

Westover, T.N. 1985: Perceptions of crime and safety in three Midwestern parks. *Professional Geographer* 37, 410–20.

Weyeneth, R.R. 2005: The architecture of racial segregation: the challenges of preserving the problematical past. *The Public Historian* 27, 11–44.

Whatmore, S. 2002: *Hybrid geographies: natures, cultures, spaces*. London: Sage.

Whitzman, C. 2002: Feminist activism for safer social space in high park, Toronto: how women got lost in the woods. *Canadian Journal of Urban Research* 11, 299–321.

Willems-Braun, B. 1997: Buried epistemologies: the politics of nature in (post)colonial British Columbia. *Annals of the Association of American Geographers* 87, 3–31.

Williams, D.R. 2002: Leisure identities, globalization and the politics of place. *Journal of Leisure Research* 34, 351–67.

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

Wolfe, R.I. 1964: Perspectives on outdoor recreation: a bibliographical survey. *Geographical Review* 54, 203–38.

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

Young, T. 1995: Modern urban parks. *Geographical Review* 85, 535–51.

— 1996: Social reform through parks: the American civic association's program for a better America. *Journal of Historical Geography* 22, 460–72.

— 2001: Moral order, language and the failure of the 1930 recreation plan for Los Angeles County. *Planning Perspectives* 16, 333–56.

— 2004: *Building San Francisco's parks, 1850–1930*. Baltimore, MD: The Johns Hopkins University Press.