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Recent work by Wright, Mullins and Watson (1991) have identified a variety of different behavior patterns and characteristics when National Park Service visitors are segmented into interpretive participant and non-participant categories. In another study Kremmer and Mullins (1991) used a modified naturalistic inquiry approach to focus on gender bias among children's preference for exhibits at a science museum. In this study boys and girls were observed to interact very differently with exhibits. The importance of the study though is not that boys and girls behave differently, but that their behavior may lead them to learn vastly different skills and information from their museum experience. Such visitor behavior studies of various target markets can help us as researchers and practitioners better understand the implication of our work to society as a whole.

The National Park Services is engaged in research to better understand visitor participation in its interpretive programs related to critical resource issues such as acidic deposition and loss of biological diversity. These impacts threaten the various natural, cultural and recreational resources managed by the agency. Without a clearer understanding of who is participating in these programs the agency has little hope of improving its targeting of messages about the extent to which the national parks are being impacted.

Organizations such as the Man and Biosphere Reserve Program, administrated through the U.S. Department of State, are concerned about how community education and public participation can become better tools for protecting world class biosphere reserves in the United States. A special 1991 issue of *Bioscience* focuses on understanding and protecting coastal barrier biospheres. Visitor behavior, interpretation, public education and tourism are key words in this issue.

Internationally, topics such as ecotourism are major issues. Tourists who engage in recreational travel often have a negative impact on the various sites they visit. Yet it is the tourists' dollars that serve as one incentive for many economically poor, ecologically rich countries to preserve these ecologically significant sites. Organizations such as the ECOCIENCIA Foundation, a nonprofit conservation group, and The Metropolitan Touring Company, both headquartered in Quito, Ecuador, are co-sponsoring interpretive and ecotourism workshops for tour guides to help them better understand visitor behaviors, and how to utilize interpretive strategies to protect both resources and economies while meeting visitor expectations.

Wherever people recreate, they come with various behavior patterns that may or may not be useful to them and the resource they are visiting. Researchers and practitioners must recognize that a clear understanding of visitor behaviors in a leisure setting is critical to meeting social and environmental needs. Much knowledge exists on the subject; much more is still required if we are to move the provisioning for visitor needs from an art to a science.

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The Benefits of Urban Parks: A Review and Discussion of Current Research

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Urban parks form an increasingly important cornerstone of our nation's recreation estate. The President's Commission on Americans Outdoors (1986) estimated that there were 67,685 local parks in the United States containing three million acres of land. Americans make good use of these lands: 39% of the people surveyed for the Commission reported using local areas often. By the year 2000, when over 80% of Americans are projected to be living in cities, the significance of urban parks will be tremendous. Despite this obvious importance, however, research on urban and municipal parks has lagged well behind other areas of recreation research. What little research there is on urban parks has tended to focus on the benefits parks provide.

The Benefits of Urban Parks

Urban parks provide a multiplicity of benefits to their communities: They create recreation opportunities, preserve open space and wildlife habitat, beautify neighborhoods and sections of cities, serve monumental or memorial functions, provide visual diversity, act as landmarks, and even guide traffic flows.

Recreation use is probably the most important category of benefits provided by urban parks. Use distribution may be a major problem, however. Gold (1972) examined neighborhood parks and concluded that many received such little use that it was difficult to justify their continued existence at public expense. More (1990) examined use rates for the entire park systems of two medium-sized (pop. ca. 40,000) Massachusetts cities and estimated that during July and August the two systems produced 605,608 visitor hours of

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use, an average of nearly 8,200 per park. The use was very unevenly distributed, however, with the bulk of it produced by only three or four parks in each system. A similar situation exists in Manhattan where there is wide variation in the use of small parks and public plazas (Whyte, 1980). At the other end of the scale, some central business district parks are so heavily used that they are seldom empty, even in the middle of the night in the pouring rain. More (1985) examined central business district parks in Boston and Hartford and found that two parks (slightly more than 40 acres of open space) produced over 300,000 visitor hours of use during two summer months, a level of productivity that rivals many better known federal recreation areas.

Use levels vary substantially through the year. In the northeast, park system use peaks during July and August, although use patterns vary substantially for specific kinds of parks (More, 1989). Thus, an athletic field may have peak use in late spring when baseball and softball leagues are active, while a business district park may show relatively constant use levels throughout the summer. Dwyer (1988) found the use of Chicago's Cook County Forest Preserve District was greatest during late spring–early summer and then decreased steadily throughout the summer. A sharp decline occurred in fall, with lowest use occurring in late fall–early winter. Daily and weekly fluctuations in attendance have also been tracked (Dwyer, 1988; More, 1985, 1989, 1990).

Various factors influence the amount of use a park receives. Location is certainly one – in Baltimore, playground use varied with distance from children's homes, distance to competing playgrounds, playground size and type, and the physical facilities (Dee and Liebman, 1970). Park facilities and amenities are important determinants of use, often transcending the influence of neighborhood social characteristics (Gold, 1977; Mitchell and Lovingood, 1983; More, 1990). Perceptions of safety may also be important (Hayward and Weitzer, 1984; Schroeder and Anderson, 1984), particularly for the elderly (Godbey and Blazey, 1983) and for women (Westover, 1988). Indeed, the lack of use in many urban parks is thought to be a major problem contributing to depreciative behavior (Gold, 1972; Whyte, 1980). One intriguing influence on use is information. Often, urban residents are unaware of municipal park and recreation services (Godbey, 1985; Spotts and Stynes, 1984); even people who live nearby may have inaccurate perceptions of the recreational opportunities and facilities that exist in a park (Hayward and Weitzer, 1983). Providing information can, in fact, encourage use by creating more favorable park images (Hayward and Weitzer, 1983). Such information must be carefully targeted to specific groups using sound marketing techniques; information campaigns relying on public service announcements may be of marginal effectiveness (Godbey, 1985; Stynes, 1988).

While overall use is an important and useful measure, it provides little information about the experiential aspects of park use. Research on this topic is even more scanty. More (1985) used systematic observation to examine behavior in two central business district parks during two summer months. With observations on over 20,000 people, he documented some 156 different activities that occurred. The most common were walking and talking or looking at something. Despite the parks' reputations, problem behavior accounted for less that one percent of all activity observed, and most of that was non-threatening activity like picking flowers or littering. Both interior and exterior park edges had a strong influence on behavior, as they do in smaller parks and plazas (Joarder and Neill, 1978; Rutledge, 1976; Whyte, 1980).

Other research has examined the effects of specific park attributes on people's experience and evaluations. Schroeder (1988), summarizing a series of studies on the perceived quality of urban parks, concluded that landscapes providing an experience of peace and serenity are highly valued. Vegetation and trees are particularly crucial to these properties, although some features that enhance scenic quality may detract from perceived safety. Hull and Harvey (1989) also found that trees and vegetation could influence individuals' emotions.

Equity and Park Benefits

A discussion of the benefits of urban parks would be incomplete without a consideration of equity – the issue of fairness in the distribution of benefits. Equity is, of course, an issue in any public expenditure, and urban recreation is no exception. Some groups, particularly the less affluent, have argued that they receive fewer services and services of lesser quality than do those living in more affluent neighborhoods, and city parks departments have been careful to address this issue, particularly in recent years.

What little research we have suggests that some problems do exist. Howard and Crompton (1984), for example, found that most municipal recreation facilities – golf courses, sports complexes, parks and playgrounds, swimming pools, etc. – serve a limited clientele. In fact, most people do not use municipal facilities at all. For those who do, use rises with income but declines rapidly with age; conspicuously absent are those in the 55 to 62 age bracket, a group likely to wield much political influence in any community.

Women are another group conspicuously absent from most urban parks (Westover, 1988). Westover found that women felt particularly vulnerable about visiting parks alone, especially in the evening. Yet, while women generally desire more visible and formal controls, other users, especially young male members of minority groups, tend to feel that many park rules are neither fair nor fairly enforced.

For specific facilities, use characteristics are influenced by both the location and the social function of a park. In a study of six Northampton, Massachusetts parks, More (1990) found that athletic fields served primarily older children and teenagers, and their parents who came to watch them play. A central business district park served teenagers who came to "hang out," younger adults taking time out from business and shopping, and seniors who gathered to meet and talk with others; the users were predominantly male. A natural

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landscaped park served primarily children, teens, and younger adults who came either alone or in small groups to stroll or sit and talk. The combined data for all parks indicate that nearly 87% of the users were under age 40, thus replicating Howard and Crompton's (1984) findings, and male users exceeded females in most parks.

Access to parklands has also been considered. Mitchell and Lovingood (1976) studied the distribution of parkland in the Columbia, South Carolina metropolitan area and found that public parkland and recreation facilities were concentrated in the central city in census tracts at the lower end of the socio-economic scale, while many suburban areas had relatively few recreation facilities. Undoubtedly, this pattern is due both to migration patterns, including rapid suburban growth, and the ability of more affluent suburbanites to rely on private facilities to fulfill their desires for recreation and open space. Yet, while residents of low income neighborhoods may have reasonable access to parkland, many other factors affect the "recreational health" of a community including the nature and quality of the facilities, the programs offered, and staff quality and responsiveness (Hamilton, Crompton & More, 1991). Many of these factors have not been systematically evaluated, and suspicion lingers that funding levels for individual parks remain highly susceptible to local political influence.

Conclusion

Because parks and open space represent increasingly scarce resources in American Cities, municipalities are increasingly concerned about finding ways to maximize the benefits they provide. Unfortunately, the designs of many existing parks are outdated for the social characteristics of the neighborhoods that now surround them (Cranz, 1982), and there is confusion over both the goals and the methods of service provision, Behavioral research can play a significant role in improving this situation. Unfortunately, such research is still in its infancy. More information is needed on a host of topics including evaluations of both on-site users and those who benefit from the externalities produced by a park. Until we develop a body of such literature, we will continue to flounder confusedly, making slight use of resources which should appropriately be considered national treasures.

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