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Do User Fees Exclude Low-income People from Resource-based Recreation?

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A mail survey of New Hampshire and Vermont households shows that although user fees are widely accepted, they may substantially reduce participation in resource-based recreation by those earning less than $30,000 per year. For example, 23% of low-income respondents indicated that they had either reduced use or gone elsewhere as a result of recent fee increases, while only 11% of high-income users had made such changes. A conjoint analysis also suggests that low-income respondents are much more responsive to access fees than high-income respondents. And we find that a $5 daily fee for use of public lands would affect about 49% of low-income people as compared to 33% of high-income respondents. We conclude that potential impacts of this magnitude highlight several critical problems in the design of recreation fee programs.

KEYWORDS: *Recreation fees, economics, low-income users, public policy*

Introduction

Congressional authorization of the current fee demonstration program, which permits public agencies to charge for access to federal lands, has reinvigorated the debate over recreation fees. Although many arguments both for and against fees have been advanced (cf., Harris & Driver 1987; Crompton & Lamb, 1986; Shultz, McAvoy, & Dustin, 1988), few are as compelling or as central to the debate as the idea that fees may exclude low-income users from access to public recreation areas. Those opposed to fees point out that exclusionary pricing raises fundamental questions about the social purposes of public recreation (More, 1999). Those who favor fees admit that exclusionary pricing might be an issue in urban areas, but argue that it is not important in resource-based recreation because: 1) Low-income people are already priced out by high travel and equipment costs (Clawson & Knetsch, 1966; Vaux, 1975), and 2) Everyone, including low-income people, must make choices about how to spend their money, so it is hardly surprising that resource-based recreation ranks relatively low among the priorities of low-income people (a version of the economic efficiency argument [see Rosenthal, Loomis & Peterson, 1984]).

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To appreciate the significance of these arguments, it is important to specify the social context within which the fee programs have been initiated. Although the United States has always considered itself to be a middle-class country, the actual historical record reveals a different picture. While income inequality has always been with us, it rose rapidly after the Civil War, peaking in the 1920's (Hurst, 1998). During the 1930's, however, social programs designed to relieve the effects of the Great Depression and the subsequent economic expansion associated with World War II combined to produce a prosperity in the 1950's and 1960's that was so widely shared that it was dubbed the "Golden Era" of the U.S. economy (Cassidy, 1995). The actual year of greatest income equality proved to be 1968 (U.S. Bureau of the Census, 1996). This prosperity began to fade during the 1970's, however, and the period between 1973 and 1993 witnessed massive increases in income inequality. During this time period, income levels for the bottom 40% of American families declined in real terms, while the costs of rent, utilities, and food rose with inflation. By contrast, the incomes of the top 20% grew so rapidly that, in 1993, they received 48.2% of the country's aggregate income (Mishel & Bernstein, 1993; Cassidy, 1995).

Income inequality has continued to grow throughout the 1990's (U.S. Bureau of the Census, 2000a). Following a major recession early in the decade, the American economy has emerged into what may be its longest-running financial boom. For example, since 1995, the stock market has created more than $5 trillion in new financial wealth (Frank, 1999). Yet over 50% of all Americans own no stock at all ("Economist urges," 1998) and have not participated in these gains. In fact, most of the gains have gone to large stockholders so that economist Edward Wolff (cited in Cassidy, 1999) estimates that 85% of the country's financial wealth is now controlled by the top 10% of the population. By contrast, in 1998 the median household income in the U.S. had risen to $38,885, the family income for married-couple families was $54,276, and for female householders with no husband present the median income was $24,393 (U.S. Bureau of the Census, 2000a). Overall, the simple fact that half the households in the U.S. have annual incomes below $38,885 indicates the extent of income disparity, and some economists believe that it would take 20 years of sustained economic growth to return us to the prosperity of the late 1960's (Marger, 1999).

The growing stress on family incomes over the past 30 years also has impacted political discourse. Many people blamed their declining incomes on big government (and government spending) so steps were taken to reduce public-sector spending. For recreation agencies, declining budgets occurred in the face of burgeoning demand, placing huge pressure on the agencies and making it difficult to sustain recreation opportunities (Morton, 1997), especially given a multibillion dollar backlog of deferred maintenance (General Accounting Office, 1998). Little wonder, then, that agency administrators eagerly turned to fees as a way out and financial self-sufficiency became a dominant park philosophy (LaPage, 1994; Leal & Fretwell, 1997). Yet as fee programs were initiated, public appropriations often declined ne-

cessitating further fee increases. While many visitors have been relatively unaffected by these increases, questions remain about the impact of fees on specific subgroups such as low-income people (General Accounting Office, 1998).

These, then, are the major players in the current fee debate: legislators anxious to shrink the size of government or to limit spending increases, agencies eager to supplement their budgets through fee programs, and a public that has decided differences in their ability to pay, coupled with a current ambivalence about taxes and government programs. And it is relative to the varying goals of these groups that we must evaluate fee programs by asking the questions implied in our title: Will fees price low-income users out of state and national parks and forests? How do nonusers feel about fees versus taxes? What alternatives to fee programs exist? In this paper we examine the attitudes of New Hampshire and Vermont residents regarding these issues, focusing explicitly on the relationships between these attitudes and income.

Background and Methods

There can be little doubt that price increases reduce use rates, particularly where demand is elastic. For example, Schroeder and Louviere (1999) found that entry fees for Chicago area sites had a significant impact on site choice, with choice probability declining steadily over the entire fee range. A $3 fee decreased the site choice probability for their entire sample by nearly 40%. Similarly, Richter and Christensen (1999), using data from a survey of Desolation Wilderness (CA) visitors, found general visitation declined with price increases. Where demand is relatively inelastic, fee increases are less likely to impact total visitation. Thus the U.S. National Park Service expected that overall visitation would not be affected, but the sites most likely to experience decreased demand were lesser known sites and sites used mostly by the surrounding communities (cited in Schroeder & Louviere, 1999).

While total visitation is certainly an issue, our research is primarily concerned with the impact of fees on different income groups. Here, there is much less information. In their review of the Demonstration Program, the General Accounting Office (GAO) concluded that fees have had little impact on overall visitation and that visitor surveys show that they have been generally well received, but noted that "some groups have expressed concerns about gaps in the research. For example, many completed visitor surveys do not address the impact of fees on some types of visitors, such as those with low incomes" (GAO 1998, p. 3). Therefore, the GAO report called for more research on the impact of fees on low-income people.

In one study that examined this issue specifically, Reiling, Chung and Trott (1992) found that increasing camping fees at Maine state parks would have a larger effect on low-income campers as compared to high-income campers. Although low-income campers in Maine camped more than upper-

income campers when fees were low, they dropped out of the market quickly as fees rose. In another study, Reiling et al. (1994) found that low-income users of day-use Army Corps of Engineers recreation facilities were more sensitive to fees than upper-income users and consequently high fees would displace a greater proportion of low-income users. The displacement was confirmed by Schneider and Budruk (1999) who found that about one-third of the visitors they surveyed at a southwestern national forest beach area had altered their visitation in response to a fee program. Of these, 62% visited the area less often, and over 50% chose to visit free sites within the forest.

A significant difficulty with many existing fee studies is their reliance on visitor surveys (as opposed to surveys of the general population). Many on-site visitor surveys have found the majority of users favor fees (Leuschner et al., 1987; Williams et al., 1999) particularly when the fees collected are used for improvements at the collection site. For example, in 1997 only 17% of visitors sampled at National Park Service sites said that fees were too high, and 12% actually claimed that fees were too low (Farmer, 1998). Similarly, Williams et al., (1999) found that most users of California's Desolation Wilderness considered fees to be acceptable, although they rated wilderness fees as less acceptable than fees for other forms of forest recreation. As noted above, such studies often argue that low-income people have already been priced out of the market for forest recreation due to high equipment and travel costs (Clawson & Knetsch, 1966; Vaux, 1975). But such reasoning may be overly general. The American working class represents a broad spectrum of the population which is neither poor nor immobile but which may be underrepresented in visitor surveys due to existing fees (More, 1999). Suppose, for example, that you owned a movie theater that charged $35 per ticket. A survey of the few people who came might well reveal that they were satisfied and supported the fee. What you would miss would be the opinions of those who never showed up because of the fee. In the private sector, of course, you would be unlikely to charge $35 per ticket: competition would keep prices in line, and reference prices—what people are used to paying—would operate similarly (McCarville & Crompton, 1987; McCarville, 1996). In the public sector, however, there generally is no competition to regulate prices and many experiences are unique. For example, a float trip down the Colorado River through the Grand Canyon (a unique experience for which there are not likely to be many reference prices) now costs $100 per person to get on the waiting list and $100 per person to access the river (Hanscom, 2000). And there are even some user groups that support fees simply *because* they will exclude other users (Winter et al., 1999).

The above considerations point to the necessity of basing public-sector pricing policy on studies of the general population rather than solely relying on on-site "customer" surveys. In theory, general population surveys can capture responses from a broad social and economic spectrum. In practice, unfortunately, obtaining responses from low-income people can be problematic; national forest system planners, for example, report that they often have great difficulty involving low-income people in their planning efforts. To

overcome these problems, we conducted a general population mail survey which utilized an unusual stratified sampling technique designed to boost responses by low-income people. We began by dividing both New Hampshire and Vermont into quadrants of nearly equal size. For each quadrant, 1990 census data were used to select the four communities with the lowest median household income. The communities ranged in size from small, rural towns to small cities of nearly 30,000 residents. A random sample of residents in each of these 32 communities was then selected, resulting in an overall sample of 1,000 New Hampshire and Vermont residents. This procedure involved making a methodological tradeoff. With it we were able to increase returns from low-income people, but at the expense of being able to make statewide projections to the population an a whole. While the study results could, in theory, be generalized to the population of residents of low-income New Hampshire and Vermont communities, it may be best to treat the comparisons made in this study as sample specific, i.e., as a randomly-selected sample of low-, middle-, and upper-income people.

The questionnaire was adapted from Dillman's (1978) total design method, and the survey was mailed in January, 1999. There were 138 unusable addresses and 296 respondents (161 from New Hampshire and 135 from Vermont) giving an adjusted response rate of 34%, about average for academic mail surveys of the general population (Mitchell & Carson, 1989). We did not formally re-contact nonrespondents as the sample design precluded making statewide population projections.

Seventy-one percent of respondents were male. The average respondent was 54 years old, had about 14 years of education, and a household income of between $30,000 and $45,000 per year. About 28% of the respondents reported an annual household income of less than $30,000 per year, 54% had incomes between $30,000 and $74,999 per year, and 18% reported incomes exceeding $75,000 per year.

Unfortunately, directly comparable socioeconomic and demographic data for the population of low-income communities in both states are not available, which limits our ability to draw general inferences. However, the median household income for 1998 was $34,592 in Vermont and $40,854 in New Hampshire. And, in 1998, about 31% of the adult (over age 24) residents of New Hampshire and Vermont were between 45 and 64 years old as compared to 41% of our respondents. Based on these figures, we believe our sample, although close to being representative on some dimensions, was still weighted slightly toward the more educated and affluent, and significantly toward males. Again, it is probably best to treat these results as representing randomly selected low-, middle-, and upper-income people.

For analysis, we divided respondents into three income groups: *low* (less than $30,000 per year), *middle* ($30,000 to $74,999 per year), and *high* (greater than $75,000 per year). On average, low-income respondents were older, had less education, and were more likely to be female as compared with middle- and upper-income respondents (Table 1). These differences, which were statistically significant ($p < 0.05$), are obviously important when

TABLE 1
Characteristics of Income Groups

Characteristics	Low Income	Middle Income	High Income
N	69	133	45
Average age	58.6	51.4	51.3
Gender (%male)	62	75	84
Average education (years)	12.79	14.60	16.78

analyzing and interpreting the survey results. Consequently, we used two tests to determine statistical significance: The standard "*z*" test was used to test for differences in population proportions, while regression analysis was used to isolate the effects of income, if any, on respondent's behavior or attitudes while holding age, education, and gender constant.

Results

To determine the impact of user fees on the three income groups, each respondent was asked multiple questions. First, respondents were asked how often they participated in various outdoor activities during the summer and fall of 1998. Compared to the highest income group, low-income respondents participated more frequently in fishing, backpacking, hunting and trips to watch birds and wildlife (Table 2). However, according to the standard test for differences in population proportion, reported participation rates for these activities did not differ statistically by income category. Moreover, when participation rates were regressed against respondent's age, education, gender and income group, income differences were not a statistically significant factor. Hunting trips, for example, showed a statistically significant de-

TABLE 2
Reported Participation Rates by Activity and Income Group, Summer and Fall, 1998[a]

Activity	Low Income	Middle Income	High Income
Picnicking	3.92	4.75	3.93
Fishing	10.81	6.17	7.77
Camping	2.84	1.29	2.93
Backpacking	.82	.35	.17
Mountain biking	1.44	3.27	1.34
Hunting	7.41	5.81	5.48
Trips to watch birds and wildlife	6.52	7.20	3.35

[a]Rate expressed as average number of times participating.

crease with age, education and female gender, but income group was not a statistically significant factor ($p < 0.05$) in explaining the variation in hunting trips per respondent.

Next, we asked if entrance, parking or access fees were a major factor influencing decisions about participation in these activities. We also asked about areas visited, frequency of visits and fees paid between May 25 and December 31, 1998. For those in the low- and middle-income groups, entrance, access or parking fees were more likely to be a major factor in activity participation decisions. Only about 11% of the upper-income group said that fees were a major factor in participation decisions, while 16.2% and 18.2% of the middle- and low-income respondents, respectively, said that fees were a major factor. These differences were not statistically significant, however.

Low-income respondents were generally less likely to have visited state parks, state forests, or national forests in either New Hampshire or Vermont during the summer, 1998. Only 34.4% of the lowest income group visited one of these areas, while 51.2% and 53.2% of middle- and upper-income residents visited these areas, respectively. The difference in visitation between the low- and upper-income groups was statistically significant ($p < 0.05$) when considered alone. However, when the effects of gender, age and education were considered, income was not a statistically significant factor explaining this difference.

We also questioned respondents about their plans for participation in winter and spring activities for 1999. As expected, the lowest income group had lower planned participation rates in several of the activities listed (Table 3) but most differences were not significant. Planned participation rates varied dramatically by income class for both cross-country and downhill skiing, however. And regression analysis showed that the differences between the low- and high-income groups were statistically significant ($p < 0.05$) for downhill but not for cross-country skiing, holding age, gender and education constant.

When asked if an increase in access fees of $5 per visit would influence participation in any of these winter/spring activities, 49.2%, 36.7%, and 33.3% of the low-, middle-, and upper-income groups said yes, respectively.

TABLE 3
Planned Participation by Activity and Income Group, Winter and Spring, 1999[b]

Activity	Low Income	Middle Income	High Income
X-Country skiing	1.52	3.16	3.26
Downhill skiing	.50	1.56	4.25
Ice fishing	1.50	1.22	.35
Snowmobiling	.48	1.61	.54
Snow shoeing	.81	1.44	1.10

[b]Average number of times planned.

A logit regression analysis (with the dependent variable defined as 1 if the individual said they would be affected by an increase in fees and 0 otherwise) showed that these differences are statistically significant ($p < 0.05$); older respondents and male respondents were less likely to be affected, while low-income respondents were more likely to be impacted, all else held constant.

Respondents then were asked a series of questions about their attitudes toward changes in fees for access and related services, and about who should pay these fees. When asked if they would favor a policy that maintains present services at parks and forests by increasing fees or a policy that keeps fees at present levels but reduces services, 67% of the mid- and upper-income respondents preferred to maintain services by increasing fees, while 57% of the low-income respondents chose this option. This difference was not statistically significant, however.

The services that respondents felt they could most do without were trails for ATV's, bikes, etc. (58%); late season campground operation (37%); Sunday operation of information areas (27%); educational programs (25%); and some boat access (22%). The services that respondents were most reluctant to give up were restroom maintenance, garbage pickup at both roadside areas and campgrounds, and law enforcement (Table 4).

We then asked respondents to assume that services at state and federal sites in New Hampshire and Vermont would not be reduced, but that more money would have to be raised to cover costs. Respondents were asked how this fund raising should be accomplished. The upper-income group clearly favored increasing access fees, while the lowest income class was much more likely to favor increased reliance on voluntary contributions or state and federal taxes (Table 5). Except for the sales tax option (see Table 5), differences between the lowest and highest income groups with respect to preferences about fundraising policies were statistically significant ($p < 0.05$),

TABLE 4
Desirability of Service Reductions

Service Reduction Option	Percent Approving Reduction
Close some trails to ATV's, bikes, etc.	58.0
Early closure of campgrounds	37.4
Close information areas on Sunday	27.3
Eliminate education efforts	24.9
Close some boating access areas	22.4
Reduce trail maintenance	17.0
Reduce fish / wildlife management	15.7
Reduce road maintenance	13.9
Reduce law enforcement	11.5
Eliminate garbage pickup at campgrounds	9.1
Eliminate garbage pickup at roadside areas	8.0
Reduce restroom maintenance	4.6

TABLE 5
Preferences of How More Money Should be Raised to Cover Cost, by Income Group[c]

Option	Low Income	Middle Income	High Income
Increase parking or access fees	26.2	38.9	60.5
Increase state or federal taxes	16.9	15.9	4.7
Increase sales tax on outdoor equipment	18.5	14.3	18.6
Increase reliance on voluntary contributions (labor or $ or both)	33.8	24.6	14.0
Other	4.6	6.3	2.3

[c]Percent of respondents selecting option.

while holding effects due to respondents' age, education and gender constant.

When asked who should pay the most to maintain and improve parks and forests in New Hampshire and Vermont, 43 percent of the low-income group said "all taxpayers," while only 27% of the upper-income group gave this response (a statistically significant difference, $p < 0.05$); 45% of upper-income respondents favored payment by campers or consumptive users (hunters, anglers). Seventy-three percent of low-income respondents either agreed or strongly agreed with the statement that "state parks and national forests should be available to everyone regardless of their ability to pay." Sixty-four percent of high-income respondents agreed with this statement, but this difference was not statistically significant ($p > 0.05$).

One potential effect of fee increases is that working-class families might reduce or eliminate visits to state or federal parks and forests. When asked, a majority of low-income respondents (53%) felt that this was an important or very important policy consideration; however, 58% of the highest-income respondents expressed the same sentiment, suggesting a broad-based recognition of the social importance of these services.

We also asked an open-ended question: "Entrance and access or parking fees to most public outdoor recreation areas in New Hampshire and Vermont have increased over the past five years; how have you responded to this change?" Although most people reported that they had been unaffected by these increases, there were important differences across income categories. Eighty-four percent of the high-income respondents, as compared to 60% of the low-income respondents, said that fee increases had not affected them or that they had "just paid" the increases. More importantly, 23% of the low-income respondents indicated that they had either reduced their use or gone elsewhere, while only 11% of high-income users had made such changes. Both of these differences were statistically significant ($p < 0.05$).

Finally, we presented respondents with four scenarios for use in a conjoint analysis. Option 1 was to stay home, option 2 was to visit a Vermont state park, option 3 was to visit the Green Mountain National Forest (VT),

and option 4 was to visit the White Mountain National Forest (NH). For options 2, 3, and 4 there were two levels of garbage pickup (none, full), two types of toilet facilities (pit, flush), three levels of increase in wildlife population (0, 10% and 25%), and three alternative fee levels per visit ($1, $2, $5). These levels were randomly assigned to the options in each survey. Respondents rated each option on a scale of 1 to 5, where 5 represents the option, if any, respondents would definitely choose.

In a conjoint analysis, respondent ratings are assumed to be proxies for individual utility. Suppose, for example, that individual utility associated with forest-based outdoor recreation is expressed by:

$$u^i(p^i, q^i, m, z) \tag{1}$$

where p^i is the fee associated with recreation option i, q^i is a vector of other attributes associated with option i (wildlife, garbage pickup, type of toilet facility), m is the respondent's income and z is a vector of individual characteristics, like age.

Assuming that utility is related to individual ratings via a transformation function, then:

$$r^i(p^i, q^i, m, z) = \phi[u^i, (p^i, q^i, m, z)] \tag{2}$$

where i^i is the rating.

Since we assume that individual ratings depend on option attributes and the respondent's socioeconomic characteristics, the following empirical relationship was estimated:

$$\begin{aligned}\text{Rating} = {} & \alpha_0 + \beta_1 \text{ garbage pickup} + \beta_2 \text{ type of toilet facility} + \beta_3 \text{ increase in wildlife population} + \beta_4 \text{ fee} + \beta_5 \text{ respondent's age} + \beta_6 \text{ dummy variable for Green Mountain National Forest} + \beta_7 \text{ dummy variable for White Mountain National Forest} + \beta_8 \text{ dummy variable for New Hampshire resident.}\end{aligned} \tag{3}$$

where α_0 and β_1 through β_8 are estimated coefficients. Separate models (equation 3) were estimated for each of the three income classes. The results reported in Table 6 (for the low- and high-income classes) indicate that for both groups, ratings increased with garbage pickup, flush toilets, the Green Mountain National Forest option and the White Mountain National Forest option. Ratings decreased with age of the respondent, access fee and residence in New Hampshire.

Of particular importance is that the low-income group was much more responsive to access fees as compared to the high-income group. That is, the access fee, which was not a statistically significant factor for the high income group was statistically significant ($p < 0.01$) for the low-income group.[1]

[1]The reported results were derived from the OLS estimating technique. Since the range of the dependent variable is limited, an ordered logit model was also estimated. The results of the ordered logit model, available from the senior author, were very similar.

TABLE 6
Regression Results of Rating Model

Variable	Low-Income Group Estimated Coefficient[d]	High-Income Group Estimated Coefficient[d]
Intercept	4.682 (8.23)***	3.934 (6.43)***
Garbage pickup (1 if full, 0 otherwise)	.749 (3.20)***	.057 (.213)
Type of toilet (1 if flush, 0 otherwise)	.534 (2.28)**	.419 (1.58)
Increase in wildlife population (%)	−.009 (.80)	.019 (1.48)
Access fee ($)	−.229 (3.27)***	−.142 (1.74)*
Respondent's age (years)	−.022 (2.88)***	−.018 (1.85)*
Green Mountain (1 if Green Mountain option, 0 otherwise)	.045 (.16)	.028 (0.9)
White Mountain (1 if White Mountain option, 0 otherwise)	.488 (1.74)*	.792 (2.48)**
New Hampshire resident (1 if resident, 0 otherwise)	−.285 (1.20)	−.432 (1.59)
	$\bar{R}^2$ = .15	$\bar{R}^2$ = .14

[d]Absolute t values in parentheses.
***The difference is significant, $p < 0.01$
**The difference is significant, $p < 0.05$
*The difference is significant, $p < 0.10$

It is also important to remember however, that the choices presented represent hypothetical situations; actual behavior may be different. Moreover, the attributes associated with each option do not represent many of the complexities associated with actual decisions. On the other hand, this type of hypothetical analysis provides information about respondent's behavior that cannot be quantified in any other way.

Discussion

Two major points arise from these results. First, there is clearly broad-based attitudinal support for fees. Forty percent of the entire sample preferred fees to other methods of raising funds (Table 5), and even low-income respondents tended to prefer fees to reductions in services.

Second, it is quite clear that fees have a major discriminatory impact on low-income people. One multiple measures and across multiple questions, the effects of income are clear, consistent and significant. For example, a larger percentage of low-income people have altered their behavior because of fees; low-income people were more likely to prefer fundraising via donations as compared to fees, and low-income people were far more likely to believe that all taxpayers should be responsible for financing public lands.

These findings clearly highlight the notion that fees strike low-income people harder than upper-income people. Some high-income respondents

also indicated that they too would be, or have been, displaced—ranging from 11% who indicated that increasing fees had changed their participation in the past five years, to 33% who claimed that they would make changes in their planned, future participation. This result compares favorably with those of Schneider and Budruk (1999) cited above. However, participation changes may be easier for upper-income people than for low-income people. Rosenthal, Loomis and Peterson (1984) argue that fees promote efficient resource allocation by sorting out high-value users (those who are willing to pay at a particular level) from low-value users (those who are not). Yet the efficiency approach, which assumes that all value is captured in a willingness-to-pay measure, is not necessarily fair since it fails to account for differences in the *ability* to pay. There is less flexibility when budgets are stretched tight, and $5 looms much larger for families making less than $30,000 per year than it does for families who earn more than $75,000, all else held constant.

So fees have both broad-based attitudinal support (including support from low-income respondents) and significant exclusionary impact. Are these findings contradictory? We think not, primarily because they have different origins. To us, it seems likely that the attitudinal sentiment arises from the dominant line of the political discourse over the past quarter century: no new taxes, reduced government spending. The exclusionary impact, on the other hand, arises from the distribution of income, a deeply structural variable and one which is likely to be a causal factor in the attitudinal response. That is to say, as the income gap widens, we are likely to see a change in the political discourse; the preferences for funding public parks and recreation expressed in this study are likely to be far more malleable than people's incomes, and there are already indications that the political wind on these subjects is changing (cf., Frank, 1999).

A second potential explanation concerns a lack of specificity in our questionnaire. Many of our questions about fees and taxes were not specific about the amount of either. It may be that people are quite used to thinking about recreation fees that range from $2 to $5 (and several questions did refer to a $5 fee), while the notion of a tax increase might have sounded vague and somewhat more threatening. Future research comparing these alternatives should probably be specific about both.

Since fees do have a significant negative impact on participation by low-income people, how should public agencies respond? Of the usual justifications given for fees, many are little more than attempts to rationalize excluded users, avoiding any moral issues involved. For example, many managers focus on agency welfare, turning excluded users into little more than an accounting problem. Similarly, a focus on resource protection or economic efficiency can support fee programs with little consideration of which visitors get excluded. The currently popular "customer" orientation can accomplish a similar result. Since low-income people are less likely to participate in many forms of resource-based recreation, they can simply be defined as "not our customers." Each of these strategies is in full play in recreation management and research; what is missing is a sense of public need or mission (More, 2000).

On the other hand, many in both the recreation management and research communities do recognize the problem and have made sincere attempts to mitigate the negative impacts of fees. Crompton and Lamb (1986), for example, recommended charging an appropriate price for a service and then finding ways, such as free days or rebates, to encourage participation by the needy. And some programs offer admission in exchange for voluntary labor. Unfortunately, such conceptions tend to underestimate how complicated life can get for many low-income people. As Rubin (1994) notes, many working-class families have both limited leisure time and inflexible schedules. They may, for example, work two jobs or have jobs on different shifts. Children and the attendant necessity of childcare arrangements complicate matters further. While unemployment may bring significant leisure, many employed working-class or working poor people are unable to take advantage of a "free Tuesday," and agencies are unlikely to offer free access on weekends when the greatest potential for revenue generation exists. Life at the margin gets complicated.

If fees are exclusionary and simple tactics like free days or rebates are ineffective, what alternatives exist? The obvious long-term solution is to establish an active constituency that will speak on behalf of public funding for parks and recreation programs. Most agencies do, in fact, have such constituencies, but clearly their effects have been limited. Perhaps more effective are constituencies for individual parks and programs—"friends groups." Unfortunately, such groups often have only localized effects and cannot contribute to the solution of a general policy problem.

What remains, then, is service reductions. A majority of our sample, including low-income people, preferred fees to service reductions. From the standpoint of excluded users, however, service reductions present the only viable options for maintaining or reducing current fees. Reductions may be possible in some of the park services listed in Table 4; state parks in both New Hampshire and Vermont have eliminated garbage pickup in many areas, for example. However, we probably have reached an era when agencies must begin to consider closing entire areas and/or facilities. There is a natural resistance to such an idea: when areas are closed, nobody gets anything and any existing infrastructure may be a target for vandalism. Even more important will be an agency's ability to withstand pressure that comes through the political system. Clearly, any decision or service reductions or facility closure needs to be made on a sound, rational basis; we very much need data on the productivity of facilities and the contributions of different services to recreation quality. Only with such data can we make informed, defensible decisions. The alternative—relying on exclusionary fees to maintain services—may undermine the social purpose of public recreation facilities.

Conclusions

User fees, although widely accepted, significantly discriminate against low-income people. Based upon our data, we estimate that a $5 daily fee for

the use of public lands will significantly impact about 49% of low-income people. Fewer members of the middle- and upper-income groups will be impacted, and their exclusion is more likely to be discretionary.

Before concluding, two caveats need to be expressed about this study. First, as noted, these results should be treated as sample specific; the nature of the sample precluded making statewide projections. The limited evidence we have suggests our sample was somewhat weighted toward more educated, affluent males. While some of these factors were held constant by the statistical analysis, readers still would be well advised to treat them simply as comparisons of people in different income groups. Second, New Hampshire and Vermont are rural states. This means that the respondents in our study may have readily available substitutes for public lands. The results might have differed if the study had been conducted in an urban state that had fewer substitute sites and where people are more dependent on public lands for access to resource-based recreation.

These caveats aside, visitor exclusion highlights a critical problem in recreation policy—the problem of public purpose (More, 1999). In general, for the public sector to be involved in an activity, there needs to be a public purpose for it—some public need that must be fulfilled, some public goal that must be accomplished. This is certainly true for public lands, and it is this public purpose that must drive policy. The national parks, for example, were founded with the dual (and often conflicting) purposes of protecting the resource and promoting public use and enjoyment (Chase, 1987). Thus, the key question with regard to fees becomes: How do fees enhance or detract from an agency's ability to fulfill its mission? The enhancements are obvious, particularly in the area of maintenance and possibly in the protection of fragile environments as well. For example, with $460,000 returned from the fee demonstration project during the 1998 season, the Mt. Baker-Snoqualmie National Forest was able to hire 24 trail maintenance workers who cleared over 700 miles of trails, improved drainage, and helped to maintain trailhead toilets and bulletin boards (Bates, 1999). Little wonder then that a majority of site managers are pleased with the program, especially when attendance remains relatively constant (Krannich et al., 1999).

Such improvements may be dearly bought, however; while total visitation may have remained constant, there is no indication in such data if the type of visitor is affected. Our data clearly suggest that fees have had a negative impact on participation for nearly half of low-income households and, as the GAO (1998) report notes, it is a bit too soon to begin predicting attendance; while we currently are enjoying a major economic expansion, what will happen when a decline sets in?

A serious, related concern is the effect of fees on minority participation; as Winter et al., (1999) note, there is remarkably little research on the effects of fees on peoples of color. Minority participation was not an issue in the present study because the populations of New Hampshire and Vermont are largely Caucasian—86% and 98%, respectively, in 1998 (U.S. Census Bureau, Online 2000b)—and most minorities were concentrated in the large cities

which did not appear in our sample. In the past, however, fees have been used to systematically discriminate against both minorities and low-income users (Caro, 1975),[2] and many minorities face other barriers to participation which fees will only compound (Phillip 1999). The effects of fees on minority participation in outdoor recreation is clearly an area that needs further research.

If low-income people are, in fact, excluded from public parks and recreation areas, then serious policy questions are raised about the very purpose of public recreation. In Vermont, for example, there are 100 plus miles of shoreline along Lake Champlain, most of which is privately owned. Wealthy people have access to the lake in numerous ways: some own waterfront property, others belong to private clubs or marinas. The public sector does own property, much of which serves to preserve access to the lake for the public at large. However, when agencies begin to act like entrepreneurs seeking self-funding through fees, and low-income people are excluded, the public purpose—the very reason for public ownership—is defeated.

Why do we have public beaches, hiking trails, campgrounds or teen centers? For these resources to be legitimately in the public sector, they must be fulfilling a public need; a clear sense of public mission and public purpose is essential to the formation of sound recreation policy (More, 2000). Unfortunately, this point is often lost in current discussions. Many see fees only in terms of cash flows—dollars taken in versus operating costs. And the recreation research literature is often most concerned with the mechanics of setting fees—reference prices, degree of acceptance, revenue optimizing and the like. Ultimately, however, a strong sense of mission and purpose are fundamental to the successful management of public parks and recreation. Our results suggest that fees undercut this mission: they are a major step in the gentrification of recreation resources. When the parks are reserved for the comfortably well-off, will they continue to be publicly necessary?

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[2]Caro (1975) specifically documents cases where Robert Moses, who held a number of park related positions in both New York City and New York State, used fees to discourage participation by minorities and low-income people in both city and state parks in the first half of the 20th century. Moses also controlled park design, swimming pool, temperatures, and employment/staffing practices to achieve these ends.

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