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The “Adaptable Human” Phenomenon: Implications for Recreation Management in High-Use Wilderness

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Introduction

Wilderness managers must balance providing access for wilderness recreation with protecting the special experiences wilderness provides. This balancing act is particularly challenging at popular destinations close to large metropolitan areas. Such destinations provide substantial societal benefits by allowing respite from city life and immersion in natural environments for thousands; however, the thousands that throng to these places detract from the wilderness and sense of solitude that wilderness should provide. Managers are left wondering what sorts of experiences are appropriate in such places or, more precisely, what experiences are so inappropriate that restrictive actions should be taken to avoid them. Particularly contentious are decisions about whether or not to deny access to people who want to visit—limiting use in order to protect experiences.

This is not a new issue. But it is an issue that is increasingly pervasive, particularly in regions such as the United States’ Pacific Northwest where large populations of outdoor-oriented people live immediately adjacent to spectacular wilderness areas. Consequently, we conducted studies of visitors to Forest Service wilderness areas of Oregon and Washington. From previous research, we have learned lots about people’s evaluations of experiences (for example, Manning 1999). How crowded does this place feel? How satisfied were you with your experience? Is this or that a problem? And we have learned lots about people’s management preferences. Do you support use limits? Should dogs be prohibited? But in exploring such questions, apparent inconsistencies have emerged. Despite apparent social impacts, experience evaluations usually remain positive and behavioral responses to impacts suggest that they are considered trivial. This suggests the need to better understand what people actually experience.

The primary thrust of our research, then, was to understand what people were actually experiencing, their evaluations of those experiences, and their management preferences. We contrasted experiences, evaluations, and management preferences in situations where there were lots of other people around with situations where few other people were around.

Study methods

We conducted nine different interrelated studies (reports are being posted at http://leopold.wilderness.net/research/fprojects/F007_B.htm as they are completed). One study, conducted at three popular destinations inside wilderness, involved in-depth interviews with people about their immediate experience. Both day and overnight visitors were interviewed on days when these places were lightly and heavily used (Hall et al. 2007).

We conducted several questionnaire-based studies—again designed to differentiate between day and overnight visitors, as well as between visitors to high- and low-use places. We surveyed visitors entering as well as exiting at trailheads, so we could compare motivations (the types of experiences people hoped to have) to the types of experiences people actually had (Cole and Hall 2005). To survey visitors at low-use trailheads, we got names and addresses from wilderness permits and sent out mailback questionnaires (Cole and Hall 2006). We also used the database of permits to draw a regional sample of wilderness users in order to study displacement. We were particularly interested in displacement caused by crowding, but we also explored other causes of displacement, types and frequency of displacement, as well as other coping behaviors (Hall and Cole 2007).

At Snow Lake in the Alpine Lakes Wilderness, a beautiful, very heavily used lake that is a one-hour drive and one-hour hike from downtown Seattle, we combined observation, interviews, and questionnaires. We observed the behaviors people employ trying to find a place to do whatever they want to at the lake—as well as their interactions with other groups at the lake. Interviews and questionnaires focused on perceptions of the situation and coping behaviors (Cole and Hall 2007).

And finally, in an effort to learn from a somewhat different population, we conducted a series of stakeholder meetings at which we explored people's opinions about how several high-use destinations in the Three Sisters Wilderness should be managed. We invited participants in earlier wilderness public involvement processes, as well as members of recreation and wilderness organizations to participate. We exposed these people to information and gave them time to explore their values—and those of other participants—and work through complex issues and trade-offs (Seekamp et al. 2006).

Results and discussion

One of the emergent themes from the studies was that while the conditions people experience at high- and low-use places are very different, differences between high- and low-use places diminished when we explored peoples' evaluations of those conditions and their management preferences. In the trailhead study, for example, the mean number of groups seen was 14 at the very high-use trailheads and 6 at the less-popular trailheads (Table 1). At Snow Lake, on weekends when use was very high, 38% of the groups we observed intruded on the space of other groups—stopping and staying at places that were already occupied. On weekdays when use levels were more moderate, only 7% of the groups we observed selected already-occupied sites (Table 2). Verbal interchanges between groups were five times more frequent on weekends than they were on weekdays. These are large differences.

Visitor evaluations of these divergent conditions did not differ so dramatically, however. In the trailhead survey, we asked people about the effect of the number of people seen on their “sense that I was in wilderness.” On a 7-point response scale, from “added a lot” (assigned a value of +3) to “detracted a lot” (assigned a value of -3) the mean response was -0.2 at very high-use trailheads and -0.1 at less-popular trailheads (Table 1). While this difference was statistically significant, a difference of 0.1 units on a 7-point scale is negligible. At Snow Lake, we asked people how much they were bothered by there being too many peo-

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	Very High Use	Moderate Use	p ^a
Mean reported number of groups encountered/day	14	6	<0.01
Effect of number of people seen on the “sense that I was in wilderness” ^b	-0.2	-0.1	0.02
Percent of groups that support limiting use now	18	16	0.82

^a t-tests and chi-square test, respectively

^b 7-point scale from “added a lot” (+3) to “detracted a lot” (-3)

Table 1. Differences in conditions, evaluations and management preferences at wilderness trailheads where use levels are very high and moderate.

	Weekend Visitors	Weekday Visitors	p ^a
Percent of groups that selected an already occupied site	38	7	<0.01
Mean number of verbal encounters ^b	0.5	0.1	<0.01
Degree visitors were bothered by “too many people near the lake” ^c	1.0	0.5	<0.01
Agreement with statement “I thoroughly enjoyed this trip” ^d	2.4	2.5	0.12
Percent of groups that support limiting use now	16	14	0.64

^a Mann-Whitney tests and chi-square test, respectively

^b Verbal exchanges (number of different groups) during a 30-minute (or less) observation period

^c 7-point scale from “not bothered at all ” (0) to “bothered me a great deal” (6)

^d 7-point scale from “strongly agree” (+3) to “strongly disagree” (-3)

Table 2. Differences in conditions, evaluations and management preferences at Snow Lake between very high use times (weekends) and less heavily used times (weekdays)..

ple near the lake. On a 7-point scale, from 0 to 6, the mean response on weekends was 1.0 and the mean response on weekdays was 0.5—again a statistically significant but negligible difference (Table 2).

All differences disappear when we move to opinions about how the Forest Service *ought* to manage these places. In our trailhead surveys, we asked people if they would support use limits now or in the future. At very-high-use trailheads, 18% of people supported use limits now, compared with 16% at moderate-use trailheads (Table 1). At Snow Lake, 16% of weekend users supported limits now compared with 14% of weekday users (Table 2). Neither of these differences is statistically significant.

Why do people who are experiencing very different situations respond to them in such similar ways? And why are most people not supportive of use limits, regardless of how heavily used a place is?

Several competing hypotheses have been suggested. One hypothesis is that the people who are bothered by crowded conditions—and the difficulty of finding solitude—have been displaced elsewhere (Dustin and McAvoy 1982). If this is common, then managers definite-

ly should give careful consideration to use limitation—otherwise quality experiences for many will become increasingly hard to find.

Another hypothesis is that encountering lots of other people simply doesn't matter much to people—the number of people encountered is simply not salient (Stankey and McCool 1984). If this is the case, it's no wonder that use limitation is so unpopular.

A final hypothesis—and this is the “adaptable human hypothesis”—is that people do care about how many other people they encounter. However, they learn; they plan; they adjust their expectations; they cope; they rationalize; they view things in relative terms—rather than in absolutes—they say “this place provides more solitude than Seattle” rather than “this place provides no solitude”; they make trade-offs. They adapt.

We believe that all of these phenomena are going on. So we are going to try to use data from our studies to estimate the relative prevalence of three types of people in wilderness: the displaced people, the people who do not care how many other people are around, and the adaptable humans. We'll do this in the context of concern about crowding and solitude—the social experience in wilderness. Also, we recognize that the lines between these categories are somewhat fuzzy and, indeed, any person may be displaced one day and adaptable on another day.

From our region-wide study of displacement, only 3% of wilderness users reported that there was a place in wilderness that they never go back to because it is too crowded. Twelve percent said that they usually or always go to less-crowded wildernesses. In our trailhead surveys, only 5% of users favored the implementation of use limits that would reduce use. When we asked people about solitude on their trip, only 5% said “solitude was important to me and I did not find it.” Collectively, these results suggest that the population of displaced users is quite small—perhaps on the order of 5–15% of the population.

What about those who do not care how many people they encounter? They are fine if they are alone and fine if they are surrounded by people. In our trailhead surveys, we asked people their preferences for encounter rates—30% said that the number of encounters does not matter to them. When we asked them about solitude, 27% reported that solitude was not important to me on this visit. People who do not care about encounters are obviously more prevalent in the population than displaced users, constituting somewhere around one-quarter or one-third of the population.

This means that the majority of wilderness users fall into the adaptable camp. Although two-thirds of our trailhead sample encountered more groups than they prefer, only 23% of these people—the ones who encountered more than they prefer—felt that this was even a slight problem. Only 5% felt it was a moderate problem. In our studies of displacement in popular wildernesses, more than 50% told us that these places felt less like wilderness than in the past. But only about 20% reported not being as satisfied with their experience as in the past and large majorities agreed with such statements as “the area is so beautiful I come in spite of high numbers of people,” “impacts could be worse considering the amount of use,” and “everyone should have a right to visit, even if it means high use.”

These rationalization processes—and the adaptability of people—were most evident in the interviews we conducted. A common response when we asked if people had experienced a sense of solitude was “Yes. I mean there was a lot of people coming down . . . solitude may

not be the word—if you wanted to get out, you could find a place.” Another person said “Not really. Well, it is a popular trail. It is close to Seattle so people just come here, but I am willing to deal with the people that are here because it is beautiful. . . .”

So, what we found is that very different experiential settings (within the range of settings found in wilderness) do not lead to very different evaluations of the quality of those experiences or to different management preferences. The primary reason for this appears to be that most wilderness visitors are highly adaptable. They prefer to use coping behaviors and to be allowed to decide for themselves whether or not to visit a crowded wilderness. Most people do not want the Forest Service to make this decision for them. So, they do not support use limits even in very heavily used places.

One final result we would like to talk about is that despite there being little difference in *mean opinions* about how to manage very different situations, *individual opinions* in each setting were highly divergent. In our stakeholder meetings, after four hours of information (about the Wilderness Act, current trends in visitor use and management, and results from visitor surveys) and exploration of values, we asked people how they felt about limiting use at two highly used destination areas in the Three Sisters Wilderness. The mean response on a 7-point scale from highly positive to highly negative was essentially neutral (0.4). But only 6% of participants actually had a neutral opinion. Large and equal proportions strongly supported and strongly opposed use limits.

Conclusions and implications

This work clarifies the difficult decisions that Forest Service managers must make. The data from the stakeholder meeting, particularly, makes it crystal clear that whatever the Forest Service does in any particular place will be strongly supported by only a minority. The Forest Service will be damned by some if they limit use and damned by others if they do not implement limits. However, our research suggests little about which minority to choose. It suggests little about whether or not limits are appropriate. Our research can be used to justify whatever the Forest Service decides, but it does not make those decisions easier or better.

Conversely, our research suggests that whatever decision is made—within reason—most people will adapt to it and accept it. Our trailhead surveys also suggest that visitors are much more supportive of use limits if the rationale for limits is protection of the environment rather than protection of experiences (Cole and Hall 2005). Although our research suggests that most people are adaptable, there is a small minority of people who have strict standards that are resistant to change. These wilderness “purists” will be displaced and marginalized if managers attend only to the wishes of the adaptable majority. Again, our research clarifies this situation but does little to suggest the degree to which managers should listen to the majority or to the “purists.”

Given the divergent opinions within these populations of users, it would seem to make sense to provide and protect a diversity of setting conditions. Still, managers are left to decide how much land and which places to allocate to each type of setting, as well as what the standards should be for each setting. Visitor opinions, norms, and preferences will not help them make these decisions if—as we found—the majority of users are highly adaptable, and opinions are homogeneous across settings but highly divergent within settings.

Science is usually more useful in clarifying and describing phenomena than in helping managers decide what they should do, and our research is no exception (Stewart and Cole 2003). Our research will contribute to prescriptive decision-making by making decisions more informed, particularly regarding consequences of alternative choices. Insights into the situation were greatly enhanced by our exploration of varied stakeholders and our use of multiple methods, applied on multiple sites.

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