

Deliberating the Experiential Qualities of Wilderness

Similar Meanings, but Divergent Standards

BY ERIN SEEKAMP AND DAVID N. COLE

Abstract: Debate continues about how to best provide and protect outstanding opportunities for wilderness experiences (i.e., solitude, primitive recreation, and unconfined recreation), particularly in high-use destinations. This study explores what these experiences mean to wilderness stakeholders attending facilitated deliberations about the management of a high-use destination in the Three Sisters Wilderness, Oregon. We found that similar meanings, but diverse standards, are attributed to these experiential qualities of wilderness. Opportunities for these experiences exist, but achieving any one experience is largely dependent on coping behaviors and making trade-offs between access and experience, as well as between these different experiences. Consequently, management of high-use destinations remains contentious.

Introduction

Legislation mandates that wilderness be managed to provide visitors with “outstanding opportunities for solitude or a primitive and unconfined type of recreation” (The Wilderness Act of 1964, section 2(c)). Yet, these experiential qualities are not defined within the Wilderness Act. This vagueness has been a source of contention regarding visitor management, as multiple interpretations of the terms exist. Additionally, examination of testimony that accompanied eight years of deliberation around the Act indicates that managers should provide “a complex set of experiences”, including solitude, primitive recreation, and unconfined recreation (Hendee and Dawson 2002, p. 22). Thus, managers are tasked with providing these complex experiences, necessitating an accurate understanding of how visitors perceive the terms.

Quantitative research on experiential qualities of wilderness is typical, with researchers operationalizing the terms without the input of visitors. Solitude, the focus of much research, is traditionally assessed through measures of encounters (Hammitt, McDonald, and Noe 1984; Manning 1985; Vaske, Graefe, Shelby, and Heberlien 1986), suggesting that



(L) Erin Seekamp below Johnson Falls, Boundary Waters Canoe Area Wilderness in Minnesota. Photo by Mae Davenport. (R) David Cole above the Aisek River, Glacier Bay National Park in Alaska. Photo by Bob Manning.

solitude is defined by the absence of others. Drawing on Westin's (1967) research from environmental psychology, Hammitt and colleagues (Hammitt 1982; Hammitt and Madden 1989; Hammitt and Rutlin 1995) suggest that solitude is a dimension of the construct privacy and, thus, is part

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of a process to optimize desired levels of encounters, rather than an outcome of acceptable limits of desired visitor densities. Most recently, a national effort to develop indicators of wilderness character specifies that solitude is a sense of remoteness from the sights and sounds of people within wilderness, and from occupied and modified areas outside of the wilderness (Landres et al. 2008).

Researchers typically reference the writings of Leopold, Marshall, and Olson to define primitive recreation as an opportunity to connect with the past and face the challenges of living simply and relying on personal skills (Borrie and Roggenbuck 2001; Landres et al. 2008; Shafer and Hammitt 1995). Yet Roggenbuck (2004) explains that the “immediate and deep contact with raw nature without the clutter and aid of modern conveniences” (p. 22) offered by primitive recreation experiences is complicated by the inherent value judgments related to the word *modern*, particularly in relation to mechanical and electronic equipment.

Definitions of unconfined recreation focus on behavioral freedoms and control. For example, McCool (2004) defines unconfined as possessing “the *internal* locus of control” over trip decisions (e.g., travel route, campsite, date of entry, and length of stay) (p. 16). Shafer and Hammitt (1995) operationalize the term as “feeling unconfined in your actions” (p. 269), whereas Borrie and Roggenbuck (2001)

interpret the term to mean, “allowing the human-nature transaction to unfold freely” through an immersion within nature (p. 204). Landres et al. (2008) recommend monitoring unconfined recreation on the basis of freedom (or the lack thereof) from management restrictions.

As use increases, providing complex opportunities (e.g., defining minimally acceptable conditions or standards; see Hendee and Dawson 2002) must be balanced with maintaining the natural and undeveloped qualities of wilderness (Cole 2000). Visitors use physical and psychological coping mechanisms (e.g., camping out of sight of other visitors, leaving an area, and altering desired expectations of being alone) to deal with compromised conditions when their thresholds are exceeded (Cole and Hall 2008; Hammitt and Patterson 1991). To address this issue, researchers are now asking visitors about the acceptability of trade-offs between protecting some qualities at the expense of others (e.g., restricting access to protect solitude); however, findings are mixed (Cole and Hall 2008; Lawson and Manning 2002). Therefore, it is important to understand how visitors describe these experiential terms and determine thresholds of acceptable conditions.

Using qualitative data from stakeholder deliberations about management of a high-use wilderness destination, the goals of this article are to: (1) explore the words stakeholders use to describe solitude, primitive recreation, and unconfined recreation (i.e., meanings); (2) examine their standards for achieving these experiences (i.e., thresholds); and (3) explore cognitive and behavioral responses to compromised conditions (i.e., coping strategies).

Methods

Four participatory meetings were held during the spring of 2005 in four Oregon communities to discuss management of Green Lakes (see figure 1), a high-use wilderness destination in the Three Sisters Wilderness (TSW). Each four-hour meeting included a presentation of technical information and facilitated small-group deliberations. A total of 150 individuals were contacted and asked to participate in one of the workshops through convenience, purposive, and snowball sampling strategies. They were drawn from a list of past participants in TSW public involvement processes, a list of regional wilderness survey respondents indicating a willingness to participate in additional research, a list of recreation and wilderness organizations in the area, and references made by the participants already recruited. Fifty participants attended the meetings (about 12 per meeting). Descriptive information illustrated that the participants visit other areas in the TSW, as well as the Green Lakes area (mean response categories were 11–15 visits and 3–5 visits, respectively).

Technical information was presented about the Wilderness Act, use trends, site conditions, current management policies, and the results of a recent survey of wilderness visitors.

Deliberations were value-focused (Keeney 1992). That is, trained facilitators encouraged participants to explain their understandings of the experiential terminology, why they valued the unique opportunities available in wilderness, and how important managing for each of the unique opportunities was to them. Additionally, participants ranked five hypothetical management alternatives and were led through deliberations about their preferences.

All information presentations and group deliberations were tape-

recorded, transcribed verbatim, and coded for emerging themes (i.e., thematic, open coding) (Strauss 1987). Commonality in meanings and standards was identified when text was coded for multiple participants within groups and between meetings. Multiple coders were used to increase trustworthiness of the interpretations and an inter-coder reliability rate of 92% was determined.

Results

Participants defined the experiential qualities of wilderness (i.e., solitude, primitive recreation, and unconfined recreation) in generally similar ways, using similar terms. Despite common meanings, participants diverged widely in their standards for achieving each experience. Most participants also articulated coping behaviors used to achieve specific experiential qualities when conditions are compromised.

Solitude

Solitude commonly meant the absence of other people (see table 1). Participants indicated solitude is important to them and that they know where to go to find it. However, standards for achieving solitude were widely divergent, as solitude is in the



Figure 1—Green Lakes and South Sister, Three Sisters Wilderness in Oregon. Photo by Erin Seekamp.

“eye of the beholder.” Standards for the absence of other people ranged from being completely alone to being alone in a group to encountering other groups. The temporal distribution of groups was also mentioned when defining solitude, but standards for time between encounters were disparate. For example, one participant explained that “you can be walking down a trail and you can pass someone

and as soon you are just kind of around the corner, you are back in solitude,” whereas another participant explained that “solitude starts for me about the third day I’m in an area where I haven’t seen anybody ... and it increases from there.”

Solitude was also defined by evidence of (e.g., litter, smoldering fires) and behavior of other groups. For example, one person explained, “I don’t even have to see people to sense people there.” Another explained that the only definable quality of solitude is the “absence of human-caused noise.”

An element of choice in deciding whether or not solitude would be their desired experience was present in participants’ discussions of how to deal with less than ideal social conditions. Commonly, destination selection was mentioned as an important determinant of opportunities for solitude. For example, one participant, responding to a question about whether or not solitude can be achieved if there are many other visitors, explained:

Theme	Subthemes
Being alone	Completely alone
	Alone with a group
	Time spent alone
	Subjective nature of “alone”
Encounters	Other groups
	Evidence of other groups
	Evidence of past groups
	Sound of other groups
	Behavior of other groups

When you asked about importance of solitude ... to me that is really important, but when I go to Green Lakes I know it is not going to happen, but I like the trail anyways and I know if I go on a weekend in August or September, there [are] going to be people out there but I still I like to go because it is a great trail. I would rather that there is no one there but I am not willing to make that trade-off to say that I have to get a lottery ticket three weeks in advance to be guaranteed to have low encounters. I can go someplace else like you do if I want to avoid a lot of people.

This quote illustrates that, at least for this stakeholder, freedom to access wilderness is preferred to limited entry, even if it means not experiencing solitude at that location or being displaced to another area to find solitude.

Other coping mechanisms (also forms of displacement) were mentioned in relation to the compromised opportunity for solitude at Green Lakes-South Sister, specifically visiting high-use wilderness destinations during low visitation seasons (i.e., late fall, winter, and early spring) or during low visitation days (i.e., weekdays). Although common, displacement as a coping mechanism to deal with reduced opportunities for solitude and a preference for the freedom to access wilderness was not a universally acceptable solution. Discontent with the trade-off of access over solitude was expressed, because it reflects an acceptance of compromised wilderness conditions.

Primitive Recreation

Most participants found primitive recreation difficult to define, but used similar words and concepts in their definitions. The term commonly meant absence of motorized equip-

ment, reliance on personal skills, and absence of evidence of management and other visitors, both past and present (see table 2). However, deliberations about appropriate technologies highlighted complex nuances and competing standards. Opinions about the appropriateness of specific types of technology (e.g., GPS units, air mattresses, camp stoves, and cell phones) were diverse, and there was frustration during deliberations about where to “draw the line” on what was acceptable. Ultimately, tolerance for mechanized equipment that did not infringe upon other visitors’ experiences emerged (e.g., carrying a cell phone for emergency purposes only).

Deliberations about evidence of management—particularly appropriateness of different structures in wilderness—revealed variation in opinions about acceptability. Opposition to structures (e.g., trail signs, toilets, and bridges) was identified, as structures are evidence of civilization and diminish the reliance on personal skills. Tolerance of some structures—especially in high-use areas—was also evident from discussions regarding their utility as a management tool to reduce resource damage, concentrate impacts, and increase the overall naturalness of the area. Tolerance for structures in the wilderness was also commonly associ-

ated with a preference for freedom of access to wilderness over restricting use. In a discussion about having toilets in wilderness, one participant explained:

There are lots of examples today of where there are toilet facilities in the wilderness. Mt. Rainer, you go up to Camp Muir and there are outhouses ... at 10,000 feet on Mt. Rainer. That’s facing reality. That’s dealing with the pressures on the land. And I think that is preferable [to] putting a date on a trailhead.

Again, the trade-off of compromised experiences for freedom of access was not universal, as structures diminish opportunities to rely on personal skills and escape civilization.

Unconfined Recreation

Unconfined recreation was commonly defined as unrestrained access to and freedom within wilderness (see table 3). This freedom included positively and negatively associated visitor behaviors, such as cross-country hiking (“roaming”), “skinny-dipping,” and “running amok.” A recognized need to restrict behavioral freedoms to avoid excessive social and biophysical impacts was common, but opinions about the desirability of different types of behavioral regulations varied.

Table 2—Common themes and associated subthemes for meanings of primitive recreation

Theme	Subthemes
Personal skills	Absence of mechanized equipment
	Absence of motorized equipment
	Subjectivity of acceptable equipment
Management	Regulations
	Signs
	Structures
	Subjectivity of acceptable management strategies

Table 3—Common themes and associated subthemes for meanings of unconfined recreation

Theme	Subthemes
Access	Unrestricted access to wilderness
	Freedom to roam inside wilderness
Regulations	No regulations
	Wilderness education and ethic required
	Some regulations required (subjective)

For example, one participant explained that “there is a big difference between me becoming well-versed in Leave No Trace and ... somebody handing me a list of 86 rules that I am supposed to follow while I am out there,” and a management regime that tells you when and where to camp “is a negation of wilderness.” Another participant explained the dilemma of managing for unconfined recreation by stating, “I realize it is almost impossible to have totally unconfined access without impacting the other parts of it ... solitude ... primitive recreation.” Others used the “gate” analogy to explain their preference for use limits to provide all of the experiential qualities once inside the wilderness gate. These examples illustrate a willingness to trade some degree of behavioral freedom to allow for better opportunities of solitude and primitive recreation and to minimize impacting the naturalness of the area.

Discussion and Conclusions

These wilderness stakeholders assigned similar meanings to the terms *solitude*, *primitive*, and *unconfined recreation*. Moreover, the words they used to describe these experiential qualities were consistent with definitions applied in past research, definitions that focus more on setting attributes that make it likely for each experience to occur than on internalized feelings

or experiences. For example, *solitude* was defined as the absence of other visitors (Hammit et al. 1984; Manning 1985; Vaske et al 1986), whereas definitions of primitive recreation focused on the absence of modern conveniences, structures and facilities (Borrie and Roggenbuck 2001; Landres et al. 2008; Shafer and Hammit 1995). Unconfined recreation was defined as lack of restriction and regulation (Landres et al. 2008; McCool 2004). These findings validate the appropriateness of management approaches focused on setting attributes, such as the Recreation Opportunity Spectrum and Limits of Acceptable Change.

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In contrast to the commonality of meanings, standards were variable. Variability in thresholds of acceptable conditions has been found in quantitative research (Manning and Lawson, 2002). Our qualitative data add richness to understanding variability and its causes. For example, in addition to number of encounters, timing of encounters was important to standards

for solitude. As suggested by Roggenbuck (2004), conflicting value judgments related to the word *modern* result in diverse standards for types of conveniences (i.e., equipment and structures) appropriate for primitive recreation. Although freedom was central to meanings of unconfined recreation, the type and magnitude of acceptable behavioral restrictions varied.

Consistent with past research (e.g., Hammit and Patterson 1991), participants described many coping behaviors. Maintaining freedom of choice was central to participants’ experiential aspirations and the coping mechanisms they employed. They exhibited a sophisticated awareness of the trade-offs between desirable wilderness attributes, with many stakeholders being personally conflicted about trade-offs. Most understood that opportunities for solitude may not be outstanding unless access is restricted and behaviors are confined, that some primitiveness and freedom is lost where actions are taken to mitigate biophysical impact and maintain quality experiences. However, when forced to express their support for actions (e.g., use limits) that affect solitude, primitiveness, freedom of behavior and access, opinions were often highly polarized, characterized by either strong support or strong lack of support. This suggests that management of high-use wilderness will remain contentious, despite public engagement and deliberation.

References

- Borrie, W. T., and J. W. Roggenbuck. 2001. The dynamic, emergent, and multiphase nature of on-site wilderness experiences. *Journal of Leisure Research* 33(2): 202–28.
- Cole, D. N. 2000. Soul of the wilderness: Natural, wild, uncrowded, or free? *International Journal of Wilderness* 6(2): 5–8.
- Cole, D. N., and T. E. Hall. 2008. *Wilderness visitors, experiences, and management*

- preferences: How they vary with use level and length of stay. Research Paper RMRS-RP-71. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Hammit, W. E. 1982. Cognitive dimensions of wilderness solitude. *Environment and Behavior* 14(4): 478-93.
- Hammit, W. E., and M. Patterson. 1991. Coping behaviors to avoid visitor encounters: Its relationship to wildland privacy. *Journal of Leisure Research* 23(3): 225-37.
- Hammit, W. E., and M. A. Madden. 1989. Cognitive dimensions of wilderness privacy: A field test and further explanation. *Leisure Sciences* 11(4): 293-301.
- Hammit, W. E., C. D. McDonald, and F. Noe. 1984. Use level and encounters: Important variables of perceived crowding among non-specialized recreationists. *Journal of Leisure Research* 16(1): 1-9.
- Hammit, W. E., and W. M. Rutlin. 1995. Use encounter standards and curves for achieved privacy in wilderness. *Leisure Sciences* 17(4): 245-62.
- Hendee, J. C., and C. P. Dawson. 2002. *Wilderness Management: Stewardship and Protection of Resources and Values*, 3rd ed. Golden, CO: Fulcrum Publishing.
- Keeney, R. L. 1992. *Value-focused Thinking: A Path to Creative Decision Making*. Cambridge, MA: Harvard University Press.
- Landres, P., C. Barns, J. G. Dennis, T. Devine, P. Geissler, C. S. McCasland, L. Merigliano, J. Seastrand, and R. Swain. 2008. *Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character across the National Wilderness Preservation System*. General Technical Report RMRS-GTR-212. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Lawson, S., and R. Manning. 2002. Tradeoffs among social, resource, and managerial attributes of the Denali wilderness experience: A contextual approach to normative research. *Leisure Sciences* 24: 297-312.
- Manning, R. 1985. Crowding norms in backcountry settings: A review and synthesis. *Journal of Leisure Research* 17: 75-89.
- Manning, R., and S. Lawson. 2002. Carrying capacity as "informed judgment": The values of science and the science of values. *Environmental Management* 30(2): 157-68.
- McCool, S. F. 2004. Wilderness character and the notion of an "unconfined" experience. *International Journal of Wilderness* 10(3): 15-17.
- Roggenbuck, J. W. 2004. Managing for primitive recreation in wilderness. *International Journal of Wilderness* 10(3): 21-24.
- Shafer, C. S., and W. E. Hammit. 1995. Congruency among experience dimensions, condition indicators, and coping behaviors in wilderness. *Leisure Sciences* 17: 263-79.
- Strauss, A. L. 1987. *Qualitative Analysis for Social Scientists*. London: Sage.
- U.S. Public Law 88-577. The Wilderness Act of September 3, 1964. 78 Stat. 890.
- Vaske, J., A. Graefe, B. Shelby, and T. Heberlien. 1986. Backcountry norms: Theory, method, and empirical evidence. *Journal of Leisure Research* 18: 137-53.
- Westin, A. F. 1967. *Privacy and Freedom*. New York: Atheneum.

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exemplified by West Nile virus and bird flu, predicting the effects of human actions on climate, improving agricultural productivity, protecting biodiversity, developing and managing renewable sources of energy, and protecting populations from both human-made and natural disasters all require a much higher level of knowledge about the operations and connections among the Earth's physical, chemical, and biological systems.

The international stage is set; what can we do as a nation? Most important, educate our public and elected officials to support building the GEOSS as rapidly as possible. Second, support U.S. assistance to the developing nations to facilitate their entry into GEO and use of the GEOSS. Third, improve observing technology. Improvements in both the quality and

quantity of space assets; development of reliable biological sensors; and comprehensive ocean and cryosphere coverage are essential. Fourth, encourage adaptation of public and private sector organizations to use and act on the information.

One modification easily made today would be the immediate establishment of a National Climate Service within NOAA. Simpler is better and we have a model. The National Weather Service (part of NOAA today) is the operational center of the federal government for collecting and disseminating operational meteorological information internationally and nationally, both to the public and private sectors. Use of the climate information for assessment of societal impacts as well as climate research should remain resident in the appropriate agencies (public and pri-

vate), just as we operate today with the weather enterprise.

What does Earth observation have to do with the wilderness? Everything! It is from the wilderness, wherever it occurs on the planet, that we observe and determine how our natural systems operate. It forms a critical part of the model for understanding the basis of sustainable life on Earth. May we become serious in preserving, observing, and learning from our wilderness!

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