Public Understandings of Nature: A Case Study of Local Knowledge About "Natural" Forest Conditions

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This study is intended to serve as an explicit and specific example of the social construction of nature. It is motivated by the need to develop a more sophisticated language for a critical public dialogue about society's relationship with nature. We conducted a case study of environmental discourse in one local population in hopes of better understanding how a place-based community of environmental stakeholders relates to its local natural environment. We did this by analyzing discussions with local residents about the values and physical indicators they associated with the wild, authentic, healthy, *and* natural *qualities of the forest. Findings from this type of study (such as our finding of "cultured naturalness") can enable a more sophisticated discussion about which of the many possible natural conditions are desirable environmental conditions for the future.*

Environmental decision making is a tournament of value wherein stakeholders compete over which definitions of nature and environmental quality are ultimately used to set land-use goals and policy. If stakeholders are to compete effectively in the tournament, then they must command the rhetorical resources to define these key concepts. At a minimum, participating stakeholders must be able to recognize the similarities and differences among competing definitions. Unfortunately, as Williams (1985) noted in his oft-cited quote, "Nature is perhaps the most complex word in the [English] language," and thus its definition is notoriously slippery. This study is motivated by the call to develop a more sophisticated understanding of the multiple and situationally specific meanings of key concepts in contemporary environmental discourse (Bird 1987; Ingerson 1994; Norton 1998; Shrader-Frechette and McCoy 1993).

In particular, this study is an attempt to better understand a *range of meanings* in public understandings of nature and naturalness. We solicited citizen-stakeholders living in the region of a prominent public forest to discuss the local forest landscape

in terms of its "naturalness," "health," "wildness," and "authenticity." Other studies that describe alternative understandings (i.e., social constructions) of nature include the Ross et al. (1997) work on "health," Peterson's (1997) work on "sustainable development," Takacs's (1996) work on "biodiversity," Lele and Norgaard's (1996) work on "sustainability," Cronon's (1995) work on "wilderness/nature," and Scarce's (2000) work on "salmon."

Literature Review

In reviewing the literature (mainly North American), we gleaned three observations that are important to this study: (1) Some people believe nature is balanced and at its "best" when dehumanized, (2) a wide range of environmental conditions count as "natural," and (3) nature is socially constructed. These are discussed next.

Nature Knows Best

Many people believe that nature is at its best (i.e., most healthy, maximum environmental quality) when humans leave it alone. Several studies serve to illustrate this point. Dizard (1994) studied public responses to management alternatives for the Quabbin Reservoir in Massachusetts (water source for the city of Boston). The reservoir managers believed that overgrazing by a protected deer herd was preventing forest regeneration and thereby threatening the soil stability, water quality, and water retention capabilities of the reservoir. People opposed to active management (in the form of a deer hunt) employed a "balance of nature" argument (i.e., nature knows best and, if just left alone, the forces of nature would regulate the deer population to the proper level). Others involved in the controversy (and Dizard himself) dismissed the balanced nature argument as romantic idealism and inappropriate for the dynamic and humanized environment of the Quabbin.

In a different study, Kempton et al. (1995) interviewed and polled a diverse sample of Americans about their environmental values and perceptions of environmental problems such as global warming. They found that people not believing in a balanced nature were more comfortable with interventionist solutions, while people believing that nature knows best would rather not intervene to solve environmental problems. People typically offered one or more of three explanations for why they took a "nature knows best" position: (1) Nature has homeostatic or self-healing properties; (2) nature is vulnerable to large-scale disturbance and might collapse if greatly disturbed by humans; and (3) nature is too complex and unpredictable for humans to safely modify it without the risk of causing more harm than good. It is because of this and related literature (e.g., Ross et al. 1997) that we chose the word "healthy" as one of the keywords used to prompt our discussion with local residents about forest conditions.

There Exists a Range of Conditions Considered Natural

The second conclusion from the literature review is that people seem able to recognize a range of landscape conditions that count as natural. Mausner (1996) found that people effectively use five different construals (or schema) of naturalness: "totally natural," "civilized natural," "seminatural," "quasi-natural," and "nonnatural." But Purcell et al. (1994) found that people are more likely to agree on the naturalness of landscapes at the extremes of the continuum (e.g., forests vs. city street scenes) than on landscapes in the middle (e.g., agriculture and canals). In recognition that there exists a continuum

of naturalness in popular discourse about the environment and that most landscapes exist somewhere in the middle, many land management systems have abandoned the more simplistic human–nature dichotomy (whereby the mere presence or absence of human influence is the criterion for naturalness) for a more nuanced understanding of naturalness (e.g., Crumley 1994; Jacques 1995).

It has been suggested that some people misinterpret the cause of "natural" landscape features. Magill (1994), for example, found that some people believe forest clearings result from "natural" (i.e., nonhuman) causes when in fact they are the result of deliberate management practices. Historical ecology and environmental history are full of examples of landscapes that once were thought to be pristine but are now known to be the product of extensive and intensive management (e.g., Crumley 1994).

Several recent studies have examined public perceptions of nature at the primitive or wild end of the continuum. MacNaghten, Brown, and Reicher (1992) found that people could discriminate between a humanized type of naturalness, where signs of human activity have the visual appearance of being in balance with nonhuman elements, and a more *wild* type of naturalness, where nature is unmarked by human intrusion. Habron's (1998) study of Scotland residents found that most people believed *wildness* exists in the Highlands of Scotland, even though that area has been highly manipulated and shaped by human activity since the last ice age.

Authenticity is another condition of naturalness commonly referenced in environmental literature (Katz 1997; Elliot 1997) and debated extensively in the context of ecological restoration programs (Gobster and Hull 2000). It refers to a state of nature that existed at some previous point in time (e.g., in an original or pristine condition). It is because of this literature that we chose the words "authentic" and "wild" as keywords in our discussions with locals about forest conditions.

Nature Is Socially Constructed

Social constructivists debate the extent to which nature can be known and shared independently of the social context that shapes the process and purpose of knowing (Bird 1987; Evernden 1992; Escobar 1999; Proctor 1998). Greider and Garkovich (1994) explained that landscapes are symbolic environments used by people to define themselves; thus, the diversity of definitions of naturalness reflects the diversity of cultures, values, beliefs, and purposes of the people doing the defining. For example, the real-estate developer looks across an open field and sees housing sites, the farmer envisions rows of wheat, and the hunter sees deer feeding patterns. Two illustrations seem especially relevant to natural resource managers. Peterson (1995) found conflicts between environmental regulators and the landowners being regulated attributable to differences between the groups' construals of nature. And Richardson et al. (1996) found that natural resource professionals' understandings and expectations of the nature they manage varied according to their disciplinary training and agency alliances.

Especially relevant to this study is evidence that people living near or in "natural" areas tend to view evidence of human culture as appropriate, acceptable, and compatible features of the natural landscape. In contrast, seasonal tourists, visiting recreationists, and other people "from away" tend to see the same place as a wild, green, natural spot on the map, a place where human presence degrades the valued natural qualities (DuPuis and Vandergeest 1996; Weaver 1996). Senecah (1996) found these differing perceptions of naturalness in the public debate over the future of the Adirondack Park in upstate New York. One group, mostly local residents that wanted to continue living in the area, became characterized as "greedy" developers, "taming"

the wilderness, "marring" vistas, "maiming" shorelines, "contaminating" water and pristine beauty, and otherwise threatening a "vulnerable" nature. Those wanting to exclude or minimize human development were construed as "nature nazis," "forest faggots," and "watermelons" (green on the outside, red on the inside), wanting to create a "scenic gulag" that did not value the local history and culture. The side of the debate composed mostly of seasonal visitors and people living outside the park boundaries wanted to minimize evidence of humans from the landscape. They characterized the area as a "spiritual" retreat, the "timeless" splendor, the green "oasis," the "forever wild" jewel that was a biological "treasure chest." They characterized those wanting to include or promote human development as environmental "rapists" promoting "unbridled, unwarranted, irresponsible, and massive" development. To one side of the debate, human culture and nature can coexist and even complement one another. Those on the other side of the debate believe that human presence can only degrade nature. These different perspectives can be interpreted as a revival of the old and overly simplistic human–nature dichotomy wherein "the human" and "the natural" are polarized as oppositional categories.

Methods

Setting

The setting for the study is the Mount Rogers district of the Jefferson National Forest. It is located in the Appalachian Mountains of southwestern Virginia, approximately a 4-hour drive from any city larger than 100,000 people. Numerous small communities (fewer than a thousand people) and two modest communities (several tens of thousands) exist within or within view of the boundaries of Forest Service lands. Recreation is becoming the dominant use (mostly horse, hike, bike), but timber, grazing, mining, and other extractive uses occur.

Informant Selection

Local Forest Service staff helped identify involved citizen-stakeholders for our interviews. Most names were drawn from the list used to solicit public input regarding potentially controversial management actions (i.e., the "scoping" list for environmental assessments conducted according to the National Environmental Policy Act, NEPA). These people represented numerous professional communities of interest (e.g., educators or environmentalists) concerned about or affected by the forest. We formed small groups using people with similar professional interests but living in different geographical locations. The shared professional interests served as a common ground for small-group discussions that took place during the summer of 1997: E, educators/teachers (5 people); O, recreational outfitters (2); T, tourism officials (3); R, real estate agents (2); N, local newspaper writers/editors (2); P, elected community leaders or politicians (3); and A, environmental group activists (4). Quotes from members of these groups are presented in the following text and denoted by the letters just given.

Procedure

As the participants lived sometimes more than an hour's drive from one another, we held the interviews in public buildings (e.g., library) at a central location. A semistructured interview guide was used to organize the interview-discussion (McCracken, 1988). *Health, wildness*, and *authenticity* were qualities of naturalness identified from

the literature, so we asked specifically about these forest conditions. We also asked two sets of less direct questions: one about *naturalness* in general and one question about *other* qualities of the forest that might explain why people care about and value the local forest. For each forest condition (e.g., healthy) we first asked whether participants valued that condition and, if so, why. We then asked how they would know or recognize that forest condition if they were to encounter it on the ground. Twenty to 40 minutes was spent discussing each forest condition. Two of the authors were present for each group interview. A video camera located in the room was used to record the interviews for later viewing and transcription.

Analysis of the interview data identified discursive themes and patterns within each forest condition. The analytical process was iterative in that themes identified evolved through repeated analysis in which the raw data were frequently referenced. Each author worked independently for the initial analysis; then we met to discuss the themes that were emerging. We repeated this process until we were confident and comfortable with our interpretations. We then presented our preliminary interpretations to local U.S. Forest Service (USFS) personnel and learned that our interpretations held power and intuitive appeal for managers knowledgeable about the local forest and the concerns of local communities. We videotaped and transcribed that meeting for analysis because the USFS staff's interpretations, use, and explanations of our findings helped us further understand our data. We further increased our confidence with a member check when we asked all the interview participants to comment on a draft project report that contained (in much more detail than is presented here) the summary and conclusions from our interviews. The intent and rigor of this study follow the research tradition set forth by the scholars cited in the literature review. While our methods of data collection and analysis are guided by the work of discourse scholars in a number of disciplinary fields, a valuable reference text is the work of social psychologists Potter and Wetherell (1987).

Limitations

Participants were selected because their opinions were deemed relevant to local decision making. While these people may not be statistically representative of the larger community, they are influential in a local planning and decision-making process, and therefore provide an illustrative case study that can help us to understand related populations. The more serious limitation of this study, which can be tested in subsequent study, is that we forced people to discuss "the forest" in relation to the concepts we discussed earlier in the literature review: *health, natural, wild*, and *authentic*. We tried not to direct the discussion about these terms, but we did legitimize them by introducing them into the discussion. Despite these cautions, we believe the results offer lessons that generalize beyond the particulars of this study. We have examined one specific case of the social discourse that defines natural areas management (not just traditional forest management, but broader issues such as predator reintroduction, exotic species removal, and fire management), and the results provide insight into how these and other management alternatives are understood and discussed.

Results and Discussion

The results are reported in the order in which we asked the questions (health, natural, authentic, wild, other). Each of the following sections is comprised of three parts: The first describes the concept in relation to how or why informants valued it, the second

describes the concept with respect to the physical indicators used to identify it, and the third discusses possible implications for management. The longer quotes presented here are specifically attributed to the type of interview group. The shorter quotes are characteristic of comments made by multiple participants in different groups and thus are not specifically attributed.

Forest Health

Values for Health

Detailed and passionate answers followed when we asked whether forest health mattered. The volume, clarity, and intensity of these responses far exceeded anything we received in response to our other questions. Analysis of comments revealed six major reasons for why forest health was valued. They are presented here in no particular order.

1. Health ensures the continued provision of *resources* (timber, recreation, clean water, tourism, etc.) and protects communities from flooding.
2. Health ensures the forest's ability to renew itself and stay a forest for *future generations*.
3. People believe forest health and *human health* are linked or related via a "food chain" or an "ecological chain," and whatever degrades forest health will likely work its way through this chain to affect human health.
4. The forest has a right to be healthy (i.e., *biorights*).
5. A forest in good health connotes *positive* images about local communities.
6. Poor health threatens *local autonomy*.

The first four reasons are ones commonly voiced in much of the popular and technical discussions and writings about forest health and environmental quality. They serve as the initial and continuing justification for federal management of many forested landscapes. However, the last two reasons seem more specific to the region and deserving of more discussion. A forest in good health connotes *positive images* about local communities. As one tourism official noted, it is like having "money in the bank. You feel better about yourself." In contrast, a forest that is "clear-cut, eroded, with no trees" is thought to suggest to visitors and community members alike that the locals are so poor "that we had to sell everything," even destroy our forests just to survive. "It is like a Grapes of Wrath image," where the family is so poor they "worked the land to [its] death just to survive" and finally had to abandon their home. Such a concern is best understood by recognizing that some locals believe that rural Appalachia has been stigmatized as a place that lacks self-respect, as a place that is "backwards, strip mined, clear-cut, and now [the setting of an aggressive state program of building] prisons." In the minds of some, a healthy forest offsets those negative images. Poor health also threatens *local autonomy* because distant environmental groups and federal regulators have a justification for imposing their national values at the expense of local values.

> If the forest gets unhealthy we are likely to lose autonomy, the ability to manage the forests for ourselves. If the forest gets unhealthy, we are more likely to get activist outsiders involved to tell us what to do. (N)

We find it worthy to note that five of the six reasons discussed above are strongly anthropocentric (i.e., forest health is valued because it affects local human communities). We heard very little of a *biorights* rationale for forest health (i.e., the forest

ecosystem or its components have an intrinsic right to health) and only then from leaders of local environmental groups. Local human community needs, rather than the rights of nature, seem to dominate the concerns of people we spoke with.

For many people there was an explicit link between forest health and forest naturalness. Some participants explicitly stated that dehumanized nature would "be more healthy." Several people explicitly used the phrase "balance of nature" to explain why naturalness was healthy, and others similarly reasoned that nature has the ability to "heal itself" or that "naturalness is more desired because it represents . . . something we know is right for the place." Consistent with the literature reviewed here, however, not everyone believes that nature knows best and some believe that "humans know better." Several people suggested forests planted by humans could be healthy, and still others suggested that human management could restore or even enhance forest health.

Indicators of Forest Health

Trees were key indicators of forest health. Almost everyone assumed that dead trees indicated poor forest health. Some people were a bit more discriminating and suggested poor forest health was associated with poorly formed trees, minimal and/or yellow foliage, small trees, or prevalence of scrub brush. *Soil stability* is another indicator of health. More precisely, visible mud, dust, and other evidence of erosion signify poor health: "The key thing is the soil, and trees keep the soil from eroding." A few people mentioned that *species diversity* indicates forest health. One of the outfitters stated proudly that "we have 21 different kinds of salamanders here" but quickly cautioned that he did not have the skills to document it. But, despite the importance people placed on forest health, most people had great difficulty describing indicators of it. People generally struggled with our question: "How do you know when a forest is healthy?" In the end, people seemed dissatisfied with their answers and suggested they did not know. Many stated an expectation and hope that we knew (as people associated with a college of natural resources) and/or that the local U.S. Forest Service knew.

In addition to direct indicators of health, people relied on indirect indicators, what Nassauer called "cues to care" (1995, 167). These cues suggest that someone is paying attention to and tending to the forest. Some of our interviewees assumed that if a manager is caring for the forest, then the manager must also be concerned about forest health (i.e., concerned about the future of the thing in which the manager invests time and energy). Cues to care provide powerful but indirect measures of forest health; they indicate a condition of forest management rather than the forest ecosystem.

A Potential Implication

Some of the people we interviewed mentioned that the silvicultural practice of clear-cutting is often a cause of poor forest health (they were not prompted about clear-cutting but mentioned it during their attempts to define forest health). When asked to explain their concerns about clear-cutting they offered vague answers with which they were not comfortable. The findings reported earlier might offer some insights into the reasons behind these strongly held but poorly defended concerns. People obviously care deeply about forest health and thus are concerned about any dramatic change to the forest condition that might degrade it. However, most people don't know how to evaluate forest health other than using vague assumptions that big, green trees are good and exposed soil is bad. When they see a clear-cut, they see something that removes trees and exposes soil, hence degrading the only direct indicators of forest health. Some people also hold a belief that undisturbed nature knows best; they believe that nature is balanced and human disturbance can only do harm. Combining the insecure feelings

of not knowing how to evaluate forest health with the trust that nature knows best may lead some people to prefer inaction over aggressive manipulation of the forest, and thus oppose clear-cutting. In a recent newspaper article, popular environmental critic Michael Pollan (1998) wrote, "I suppose that when you don't trust yourself to make wise decisions about the land, letting nature decide the matter is an appealingly straightforward approach."

Naturalness

Values for Forest Naturalness

People valued natural qualities of the forest, but their reasons were noticeably less specific than their reasons for valuing forest health. As mentioned earlier, many people believe that a natural forest is a healthy forest. Hence, many of the benefits people attribute to a *healthy* forest were also attributed to a natural forest. Naturalness is also valued for its *aesthetic* and *recreational benefits*. Not only does it provide "good fishing" and "natural beauty," but it also provides an *escape*. It allows one to "get away from civilization, to get away from phones and chores and crowds." When discussing the role nature plays in their lives, some people offered explanations that resonate with the Romantic and Transcendental experiences of John Muir and Henry David Thoreau:

> It gets me back to what I really am . . . lets me know what is really important in life . . . some of this other stuff will be gone but hopefully this forest is going to be here in 100 years . . . the forest is more enduring than most of what goes on in this day and age. (E)

One educator made explicit references to enhanced *spirituality*, suggesting that viewing the natural landscape, in particular the mountains, made him feel "connected with God":

> You can go back to the Bible . . . I look up [at a particular mountain] . . . you look up for help. And there is something about that, I feel good, I draw strength from that. (E)

Indicators of Forest Naturalness

As with indicators of forest health, residents struggled to articulate what made the forest natural. It is not at all obvious when something changes from being natural to being unnatural. At some point, human-induced change to a natural setting exceeds the standards for naturalness and the setting becomes "artificial" or "built" or "urban." Some confident statements were made that "you know it when you see it." Emphatically, it is "Not Disney! Not Gatlinburg!" and "Walmart would ruin it." Clear indicators of these standards include *large-scale construction*. Other indicators were not easily articulated by participants. Typical of many interview participants, a tourism official described a relativistic perspective of what constitutes naturalness, arguing that different people have different perceptions of what is natural and therefore it is not possible to define naturalness according to consistent or objective criteria:

> One group may stay in a cabin, go hiking for the day, and have meals catered and they call that a natural experience, another may want to do rough camping, another may want isolated cross-country skiing. All of them want to get back to nature, they all want to get back to green nature. (T)

The *randomness* and consequent unpredictability of a setting provide an indicator of naturalness. Many participants suggested that trees planted in rows were less natural. One person illustrated this point by describing a picture of a daisy he has in his office. The image had been photographically manipulated so that each petal was identical, with the exact same shape, size, and (im)perfections:

> You can tell in an instant that it is so artificial, not natural . . . I would not like [the forest] planted in rows, it's not natural. I'd rather have it random, just the way it came. (P)

This randomness leads to *unpredictable experiences*, which seem to be a related indicator of naturalness. One of the outfitters explained:

> Natural also would mean that you're seeing trees that are growing from seeds that have dropped from the trees. You're seeing mayapples that have just spread at random because that's where they went; nobody went out and decided we're going to have a thing of mayapples over here and a thing of something else over here. That's the surprise. Anytime you're on a trail or something like that or walking cross-country and you just sort of stumble upon these wonderful surprises that are around every little bend, whatever they are—a funny tree root, or some kind of a bird or something like that. It's a constant surprise. (O)

The *symbolic distance from contemporary society* emerged as another important indicator of naturalness. Human-caused alterations that symbolize or remind people of modern society are viewed as less natural: "Don't bring the thing in that people are trying to get away from" because it makes the place less natural: "no houses, no phones, no lights, no motorcycles." Even seeing "logs cut to length" could symbolize unnatural conditions for some.

An ongoing debate over methods for protecting the local high-country meadows (grassy balds) from "natural" reforestation is illustrative of symbolic distance as an indicator of naturalness. These meadows are a valued resource to many in the local community because they provide dramatic panoramic views as well as tasty blueberries. There are proposals to reintroduce elk or buffalo as grazers, in part justified because these practices are more "natural" than the current practices of maintaining the openings through grazing by cows and feral ponies, prescribed burning, spraying herbicides, and mechanical brush removal. There are also proposals to let the forest reclaim the meadows. Much of our discussion with local educators dwelt on management alternatives for the balds. We present a sample of their comments to illustrate how notions of naturalness influence people's preferred management options:

> It is more pleasing to look at animals grazing than mowing or spraying because it is more the way it was before people got involved. (E)

> The elk are most acceptable because they were here before, the cows are not as acceptable because . . . [the cow] is a symbol of the barnyard. The ponies are acceptable because they are an animal, and from that stand point I can accept them being there even though they are not native to this part of the world. They are that far removed from the use of today that . . . they are more acceptable. (E)

[Prescribed] burning is [more acceptable than chemical spraying because it is] a replication of something that happens anyway, [something that] is unintentional. (E)

Spraying is unacceptable because it is not natural, it introduces something that does not belong there. (E)

A Potential Implication

Brunson (1993) reported that public acceptability of forest management practices can be enhanced if the practices are perceived to be natural or mimic natural processes. The example of managing the grassy balds supports this conclusion (i.e., the fire is preferred over spraying because it is "something that happens anyway"). In addition, our findings suggest that acceptability may be enhanced if the management appears more natural because of its symbolic distance from civilization. For example, as a means to keep the balds clear of invading forest, grazing by elk is more acceptable than grazing by ponies, which, in turn, is more acceptable than grazing by cows. In these cases, naturalness and acceptability are enhanced by management actions that have greater symbolic distance from contemporary civilization: The cows symbolize the commerce of agriculture, the ponies were introduced by humans a long time ago, and the elk not only were here for a long time but were here independently of human enterprise.

Authenticity

Values for Forest Authenticity

Our questions about authenticity evoked the most silence and quizzical looks of all our questions. When further prompted with the term "original" most people still had no comment. Several participants suggested that authentic nature provides a powerful *educational tool*, a cultural history lesson and a useful supplement to the classroom experience.

They have to see it. They have to stand next to it and witness it and go . . . wow. That experience has value because it teaches people about what was here and what could be here. (P)

On a more pragmatic level, authentic nature is valued because it sells. Authenticity provides a *tourist attraction*. Some tourism officials were concerned to learn (from discussion during the group interview) that the high meadows (balds), which attract tourists from outside the region, require active management and thus were not "authentic." The reason for their concern is captured in the following quotation, which is repeated here because it illustrates that people conceptually grasp that nature exists in different states associated with different stages in local history.

If tourists learned the balds were man-made the balds would not sell as well. . . . It is more valuable as a tourist destination if it is older, the result of Native Americans. It makes all the difference if we can say it is 500 years old instead of 100 years. (T)

Indicators of Forest Authenticity

The most common response was "I don't know." Some participants mentioned the "pre-European condition" of the forest but were unable to describe attributes of

this state of nature. A few people described direct indicators such as "big trees" and "bountiful wildlife." The pre–Native American state was mentioned less frequently.

A Potential Implication

The ecological conditions believed to exist at the time of pre-European settlement often serve as the goal for ecological restoration efforts (Katz 1997; Elliot 1997). While the merit of these goals is heavily debated within the community of restoration professionals, volunteers, and scientists (Gobster and Hull 2000), the ability to build public support for such goals may be limited because this condition of nature is not well understood, at least by the people we interviewed.

Wildness

Values for Forest Wildness

The term "wild" was easily used and seemed part of the vocabulary of most (but not all) people we interviewed. Some interview participants appreciated wildness because it symbolizes a "simpler" or "saner" lifestyle (what scholars refer to as *primitivism*; Oelschlaeger 1991). Wild nature provides the means for humans to find what agriculture and the enlightenment lost: "Getting back to wildness would help us get back to our roots." Also, wild areas provide very *special recreation experiences* for locals: "It provides a type of recreation experience that some ... [not all] people value. Some people like to really get back to nature, to rough camp, and they should have that opportunity." Wild nature was also valued because it is assumed to be *healthy*, apparently drawing on the common assumption that nature "knows best" and, as one environmental activist noted, wildness is valued because "that is where evolution takes place."

People also valued wildness because it provides *educational and scientific* benefits to society. "The purpose of [a] wilderness area is not recreation, but rather as a place to study nature, to learn how trees grow, etc." We also heard (and not just from the tourism officials) that wild nature was valued because it attracts outsiders to visit and spend money in the *local economy*. Other participants pointed out that wildness has little value or even negative value to the economy. Some think it is of "no use at all." In a wild state, the land loses productivity and the ability to generate taxes: "The wild qualities do not add anything to the economy."

Indicators of Forest Wildness

Some people knew that federally *designated Wilderness* areas existed and used this as an indicator. To some, a wild forest required a very *large*, contiguous area without management, and they argued that these conditions no longer existed in the local region, and probably did not exist anywhere on the eastern coast of the United States: "Maybe out West somewhere, but not here." The local forest is fragmented by roads, trails, pipelines, airplane overflights, transmission towers, and human communities.

> Can't get there [i.e., wild] from here because land is too cut up, too small, too changed, no wildlife migration. The land is not now functioning as a wild system and it has changed too much to get it back. (N)

For many people, especially those who felt wildness still exists in the region, indicators of wildness were very similar to indicators of naturalness that we described earlier as a *symbolic distance from civilization*; that is, wild nature exists where vivid

reminders of civilization are absent. Another frequently mentioned indicator was the *absence of people*. Wild places are associated with "few or fewer people." Many interviewees seemed to associate wildness with *solitude*, a type of recreation experience where few people are encountered.

Wildness also implied, to some, *unmanaged processes*, where nature charts its own course. The emphasis here is on the unmanaged ecological processes rather than evidence of humans or human impact. As can be seen from the following quote, and consistent with the literature review, some people believe that these wild processes can occur despite considerable previous human influence:

> If I took the thirty acres [of previously harvested forest] and for the next 50 years I let it grow uncontrolled, if I let the trees fall here or there, then that would be wild. (N)

The discussion of a potential implication of our findings about wildness is combined with the discussion in the next section.

Cultured Naturalness

After considerable discussion about the health, naturalness, wildness, and authenticity of the local forest, we asked people several very general questions: "What do you value about living near the forest? How does the forest impact you? How do you and others depend on the forest?" Answers to these questions revealed an image of a forest that was lived in, storied, and full of local culture. Respondents described their local landscape as a natural one that also contained highly valued symbols of human culture.

Values for Cultured Naturalness

Cultured naturalness is valued because it promotes and *communicates local identity*. "It is not just the forest, it's the turn back in time ... we have a quality here ... that connection to the past is as important as the natural quality." It also reminds locals that contemporary people are *making a living* off the land: "I don't have any problem seeing Christmas trees in rows. It symbolizes that people are making a living," offered one politician. Or, "[The District Ranger] told me that they give out grazing permits partly to maintain cultural roots ... links to the small farm heritage ... I agree with this."

Cultured naturalness is also valued because it creates rich and intense *recreation experiences* for locals and visitors alike. The outfitters were particularly vocal on this point, describing how the cultural histories of natural places create profound experiences for their clients.

> [People want to] step back in time, they want to see evidence of living off the land, to see farms, meadows, barns. They want to hear and to see stories of how ancestors used the land, sold horses, worshipped God, fought one another, and celebrated life. ... These people want to know geology ... they [also] want to know the folklore. (O)

Indicators of Cultured Naturalness

Just because a forest evidences culture does not mean that the culture dominates nature. Some modification of nature is required to create a sense of cultured naturalness, but too much modification would "ruin it." As one outfitter confidently stated, "There

are some ways we can intrude into the forest and it is mostly natural." Or, as a local teacher more tentatively stated, "Maybe by just not constructing too much in those nonwilderness areas, we can recognize that as nature." How much modification is too much? As noted in the discussion of indicators of naturalness, it is not clear where along the human–nature continuum something natural becomes unnatural. Based on the comments we heard, we concluded that our interview participants felt that this critical point has not been crossed in the forest surrounding these communities.

Access is an indicator that many people used to describe cultured naturalness. Landscapes with cultured naturalness have convenient access by roads and trails. However, this access is acceptable only if it gives the appearance of not imposing on or threatening the naturalness of the landscape. An outfitter, acutely aware that his business required both naturalness and access, argued:

> We need the access . . . nice country roads that are sufficient. We have done all we need to do to make it accessible. If we do more than that, we do damage [to the natural qualities]. (O)

The type and conditions of *roads* are a key indicator of the type of access that is acceptable in cultured naturalness. Small, paved or gravel, winding two-lane roads are appropriate. Four-lane, Interstate-straight, indifferent-to-terrain roads are not appropriate. A recent and hotly debated local issue was the widening of the major highway bisecting the region. In the end, the four-lane, Interstate-type road was rejected in favor of adding one lane to the existing two-lane, winding and scenic road. The image of the Blue Ridge Parkway was invoked as appropriate and consistent with people's image of the region characterized as cultured naturalness.

> The Blue Ridge Parkway . . . they keep it mowed nicely, it's asphalt, it certainly wasn't there to begin with, but I can get up there and see that beautiful Appalachian and Blue Ridge forest . . . [from that] unobtrusive path. (E)

Another important component of cultured naturalness is the story of local life that landscapes tell. Obvious symbols illustrating the meanings that make up local stories include *small-scale agriculture*: "small farms," "small grazing efforts," "small roads through hollows," and "seeing horses." Small-scale and *primitive technology* rather than large-scale industrial agricultural practices are also indicative of cultured naturalness. The meanings and stories are further promoted by forest settings that serve as venues for *cultural activities* such as bluegrass festivals, ramp festivals, and arts and crafts festivals. Additionally, events such as Arbor Day tree plantings, organized trail clearings, and fire prevention training build respect, investment, and commitment to the forests among community participants. Historical personalities are illustrated through formal Forest Service and community sponsored interpretative efforts. People value these programs because they further enhance cultured naturalness by strengthening the attachment of the cultural story to the landscape.

> Forest staff go to festivals and portray past cultural figures. This is critical for our children and valued by our community for the same reason that communities build museums or teach history. . . . It teaches children something about their history and their ancestors . . . how they dressed, what they did, how they acted, what they cared about. . . . We all need to know something about our heritage. [P]

A Potential Implication

Previous studies such as the one by Senecah (1996) of the Adirondack Park (reviewed in the introduction) found differences between local and distant constituencies. Some of the locals we interviewed portrayed outsiders, especially those from distant urban centers, as thinking of the forest as a wild, unpopulated, green place on the map where nature, not people, resides. We have no data to support these statements about outsiders because we interviewed only locals. But it was clear that some locals assumed that outsiders valued the wild qualities of nature more than they valued cultured naturalness. Furthermore, these locals resented outsiders for trying to impose their construal of the forest on discussions about local planning issues.

> Outsiders who advocate wild qualities for the ... area seem to be ignorant of the heritage here that is being preserved in the landscape. Outsiders think they know what beauty is, but they don't. They have different expectations than locals. (N)

Locals seem more likely to evaluate potential forest management actions using cultured naturalness as the basis of comparison (i.e., as the desired future condition). Using cultured naturalness as a standard, locals conclude that many forest management actions enhance desired qualities such as cultural identity, recreation, convenience, and employment. Some of these same locals perceive that when outsiders evaluate potential forest management actions they use dehumanized, wild nature as the ideal and thus conclude that no management is better than any management. There are locals that share this preference for a dehumanized nature and, no doubt, there are distant constituencies that value a cultured nature. Nonetheless, these differences in perspectives, real or perceived, lead to conflicting goals about the type of naturalness that should be promoted through forest management. Constructing referents that clearly illustrate different types of naturalness along the human–nature continuum might help resolve (or at least expose) some of these conflicts.

Conclusion

Naturalness is a powerful yet contested construct in contemporary society. One of the challenges facing stakeholders concerned about the environment is communicating with one another about intentions and values associated with the nature being managed and studied. Clearly there are many interpretations of terms associated with naturalness. We detailed several of them in the previous section and speculated about several implications these findings suggest. By way of conclusions, we would like to note that our findings reinforce and add depth to the findings of other studies summarized in the literature review. People care deeply about environmental quality: Some assume nature is balanced and knows best, others believe that human intervention can improve environmental quality, and most admit they really don't know how to assess it. Likewise, a range of natural conditions seems to exist, from the wild, dehumanized extreme through to conditions that clearly evidence the care and culture of humans. Society will be better able to engage in sophisticated discussion about which nature we want and why we want it if we have more explicit examples of the social constructions of nature, environmental quality, and desired future conditions.

References

Bird, E. A. 1987. The social construction of nature: theoretical approaches to the history of environmental problems. *Environ. Rev.* Winter:255–264.

Brunson, M. 1993. Socially acceptable forestry: What does it imply for ecosystem management? *West. J. Appl. For.* 8(4):116–119.

Cronon, W., ed. 1995. *Uncommon ground: Toward reinventing nature*. New York: Norton.

Crumley, C., ed. 1994. *Historical ecology: Cultural knowledge and changing landscapes*. Santa Fe: School of American Research Press.

Dizard, J. E. 1994. *Going wild: Hunting, animal rights, and the contested meaning of nature*. Amherst: University of Massachusetts.

DuPuis, E. M., and P. Vandergeest, eds. 1996. *Creating the countryside: The politics of rural and environmental discourse*. Philadelphia: Temple University Press.

Elliot, R. 1997. *Faking nature: The ethics of environmental restoration*. New York: Routledge.

Escobar, A. 1999. After nature: Steps to an antiessentialist political ecology. *Curr. Anthropol.* 40(1):1–30.

Evernden, N. 1992. *The social creation of nature*. Baltimore, MD: Johns Hopkins University Press.

Gobster, P. H., and R. B. Hull, eds. 2000. *Restoring nature: Perspectives from the social sciences and humanities*. Washington, DC: Island Press.

Greider, T., and L. Garkovich. 1994. Landscapes: the social construction of nature and the environment. *Rural Sociol.* 59:1–24.

Habron, D. 1998. Visual perception of wild land in Scotland. *Landscape Urban Plann.* 42:45–56.

Ingerson, A. E. 1994. Tracking and testing the nature-culture dichotomy. In *Historical ecology: Cultural knowledge and changing landscapes*, ed. C. Crumley, 44–66. Santa Fe: School of American Research Press.

Jacques, D. 1995. The rise of cultural landscapes. *Int. J. Heritage Stud.* 2:91–101.

Katz, E. 1997. *Nature as subject: Human obligation and natural community*. Lanham, MD: Rowman and Little.

Kempton, W., J. S. Boster, and J. A. Hartley. 1995. *Environmental values in American culture*. Cambridge, MA: MIT Press.

Lele, S., and R. B. Norgaard. 1996. Sustainability and the scientist's burden. *Conserv. Biol.* 10:354–365.

MacNaghten, P., R. Brown, and S. Reicher. 1992. On the nature of nature: Experimental studies in the power of rhetoric. *J. Community Appl. Social Psychol.* 2:43–61.

Magill, A. 1994. What people see in managed and natural landscapes. *J. For.* 92(9):2–16.

Mausner, C. 1996. A kaleidoscope model: Defining natural environments. *J. Environ. Psychol.* 16:335–348.

McCracken, G. 1988. *The long interview*. Newbury Park, CA: Sage.

Nassauer, J. I. 1995. Messy ecosystems, orderly frames. *Landscape J.* 14:161–170.

Norton, B. G. 1998. Improving ecological communication: The role of ecologists in environmental policy formation. *Ecol. Appl.* 8(2):350–364.

Oelschlaeger, M. 1991. *The idea of wilderness: From prehistory to the age of ecology*. New Haven, CT: Yale University Press.

Peterson, T. R. 1995. Rooted in the soil: How understanding the perspectives of landowners can enhance the management of environmental disputes. *Q. J. Speech* 81(2):139–166.

Peterson, T. R. 1997. *Sharing the earth: The rhetoric of sustainable development*. Columbia: University of South Carolina Press.

Pollan, M. 1998. Should people garden a nature area in order to retain a farm look? New Homes section of *Chicago Tribune* (April 25). New York Times News Service.

Potter, J., and M. Wetherell. 1987. *Discourse and social psychology: Beyond attitudes and behaviour*. London: Sage.

Proctor, J. D. 1998. The social construction of nature: Relativist accusations, pragmatist and critical realist responses. *Ann. Assoc. Am. Geographers* 88:352–376.

Purcell, A. T., R. J. Lamb, E. Mainardi Peron, and S. Falchero. 1994. Preference or preferences for landscape. *J. Environ. Psychol.* 14:195–209.

Richardson, C. W., R. G. Lee, and M. L. Miller. 1996. Thinking about ecology: Cognition of pacific northwest forest managers across diverse institutions. *Hum. Organizations* 55:314–323.

Ross, N., J. Eyles, D. Cole, and A. Iannantuono. 1997. The ecosystem health metaphor in science and policy. *Can. Geographer* 41(2):114–27.

Scarce, R. 2000. *Fishy business: Salmon, biology, and the social construction of nature*. Philadelphia: Temple University.

Senecah, S. 1996. Forever wild or forever in battle: Metaphors of empowerment in the continuing controversy over the Adirondacks. In *Earthtalk: Communication empowerment for environmental action*, ed. S. A. Muir and T. L. Veenendall, 95–118. Westport, CT: Praeger.

Shrader-Frechette, K., and E. D. McCoy. 1993. *Method in ecology: Strategies for conservation*. New York: Cambridge University Press.

Takacs, D. 1996. *The idea of biodiversity: Philosophies of paradise*. Baltimore, MD: Johns Hopkins University Press.

Weaver, B. J. 1996. What to do with the Mountain People?: The darker side of the successful campaign to establish the Great Smokey Mountains National Park. In *The symbolic Earth*, eds. J. G. Cantrill and C. L. Oravec, 151–175. Lexington, KY: University of Kentucky Press.

Williams, R. 1985. *Keywords: A vocabulary of culture and society*. New York: Oxford University Press.