

The Arctic National Wildlife Refuge: An Exploration of the Meanings Embodied in America's Last Great Wilderness

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Abstract—The Arctic National Wildlife Refuge has been the subject of more than 50 major studies investigating the bio-physical resources potentially threatened by oil development. This continuing project investigates the more elusive qualities at risk: the set of meanings this place holds for those who value it as wilderness. Findings indicate that these meanings may also be diminished or dispelled by the potential introduction of new technologies, public uses or management actions that leave no footprint, some as intangible as the mere naming of a mountain. A network of fourteen meanings is described to provide a framework for interpreting the wilderness experience visitors seek and discover here, and for understanding the refuge's emergence as a symbolic landscape of national significance.

In 1953, a feature article appeared in the journal of the Sierra Club extolling the wilderness qualities that two scientists found in a remote corner of Alaska. *Northeast Arctic: The Last Great Wilderness* (Collins and Sumner 1953) began the transformation of this remote, little-known section of the Brooks Range into a place internationally recognized as one of the finest examples of wilderness, the Arctic National Wildlife Refuge.

The authors, National Park Service planner George Collins and biologist Lowell Sumner, recruited Wilderness Society President Olaus Murie and his wife Margaret into an effort to seek permanent protection for the area. They were soon joined by other prominent conservationists, including scientists Starker Leopold and F. Fraser Darling, Supreme Court Justice William O. Douglas and Alaskan environmentalist Virginia Wood.

It is noteworthy that their campaign to establish the Arctic Refuge occurred at a pivotal period in American environmental history. The mid-1950s witnessed the beginnings of a new environmentalism, a perspective recognizing a far broader range of landscape values than that of utilitarian conservation.

Two key figures of this emerging paradigm strongly influenced the perceptual lens through which the refuge founders saw this area. Robert Marshall's writings about the values of wilderness, and his two books about adventuring in the

Central Brooks Range, expanded their understanding of the psychological benefits and cultural values one could experience in this landscape (Collins, personal communication 1994, 1995). Aldo Leopold, a personal friend of most of the refuge founders, was another who had a "profound effect" on the range of scientific, experiential, and symbolic values they perceived wild places to hold. Collins says that Leopold's writings gave early refuge proponents more reasons to value wilderness. "It was his ideas that we brought with us to Alaska" (Collins, personal communication 1999).

Through the late 1950s, the founding conservationists' writings inspired a growing constituency to write, speak and testify for the area's permanent protection. In 1960, the nine-million-acre Arctic Range was established by order of the Secretary of the Interior. In 1980, the Alaska National Interest Lands Act more than doubled the Range and renamed it the Arctic National Wildlife Refuge. Although only 41 percent is designated as wilderness, the U.S. Fish and Wildlife Service seeks to preserve the same level of naturalness on both sides of the unseen line separating the designated and de facto wilderness.

The refuge remains a place "where the wild has not been taken out of the wilderness," an agency brochure advises prospective visitors. "Perhaps more than anywhere in America," it continues, the refuge "is a place where the sense of the unknown, of horizons unexplored, of nameless valleys remains alive" (U.S. Fish and Wildlife Service, undated).

But what constitutes this "sense" of wildness (fig. 1)? The best-known component is the refuge's assemblage of wilderness-dependent wildlife, symbolized by the 120,000-strong herd of free-roaming caribou that evokes comparison to the buffalo of yesteryear. Another major component is the scenic and untrammelled completeness of the five major ecosystems through which the caribou move. But the brochure statement alludes to something beyond, something embodied by these biophysical qualities. It was inspired by what Olaus Murie (1959a) articulated in his congressional testimony, stating:

It is inevitable, if we are to progress as people in the highest sense, that we shall become ever more concerned with the saving of the *intangible resources*, as embodied in this move to establish the Arctic Wildlife Range (emphasis added)

Murie readily admitted his inability to "define the wilderness philosophy in human words" (p. 63). Since his time, environmental psychologists have labeled the intangibles that figured so prominently in the establishment of the Arctic Refuge as "psychologically deep," "subliminal," "preverbal," and "archetypal." Perhaps they are best summarized by Aldo Leopold's (1966) simple phrase, "Values as yet uncaptured by language" (p.102).

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Figure 1—What constitutes wildness?

Wilderness Qualities at Risk

The hard-to-define character of these qualities challenges wilderness advocates, managers and policy makers who wish to preserve them. But as psychologist Herbert Schroeder (1996) reminds us, their elusive nature is part of their essence and strength—their mystique. Thus, this investigation proceeds with misgivings. Like the wild caribou, these qualities of wildness ought to be left alone, unstudied and unexamined. Indeed, they could be if remoteness would continue to protect this landscape. But even the distant Brooks Range is not far enough from new technologies and public and agency actions that threaten qualities that the founders believed should be timeless.

Perhaps the most intangible threat Murie resisted was the attachment of names to natural features (Murie 1959b). But recently, part of the Arctic Refuge was named for a former agency head, who by all accounts, was well liked by the conservation community. Nevertheless, as the director of a Fairbanks environmental organization put it, the name “took some of the wild out of the Refuge,” and “some ineffable quality has been lost” (Ward, personal communication 1997).

A greater threat to elusive wilderness qualities may be the potential development of “quiet” helicopters. If helicopter technology continues, the legitimizing rationale used to exclude

them (noise) from the refuge’s non-wilderness designated areas may be voided. Further, recent legislative attempts to allow helicopters in Alaskan wilderness highlight the need to consider aspects of peoples’ experience that may be altered when they know that any destination, every place along their route, could be accessed by a machine.

Visitors have also questioned the effect of new technologies that have only a temporary presence in wilderness, such as communications systems and the ubiquitous global positioning systems.

But a developing technology that may become more controversial—and raise questions that reach into the deepest philosophical and psychological underpinnings of the wilderness idea—is one that neither leaves a footprint, nor has any physical presence. Beyond anything the refuge founders could have envisioned is the computer wilderness-trip planning program proposed for the Boundary Waters Canoe Area (Lime and others 1995). It is a product of several exponentially expanding technologies converging with geographic information system (GIS) resource databases. Linked to high-resolution remote sensing imagery, this technology could reveal intimate details of wilderness areas through a few keystrokes.

Technology may soon allow users of Internet-based wilderness-trip planning programs not only to “shop” for qualities desired in a wilderness trip, but also to “order up” and view in detail destinations, routes, features or campsites with attributes specified in a visitor’s motive profile. A researcher with the Boundary Water’s project, a first-generation prototype of such a program, predicts that eventually the technology could lead to virtual reality “fly-overs” of wilderness, along with enhanced “fly-ins” for close-up views of selected features or routes. “If there is anything I can tell you about this technology,” Michael Lewis said, “the sky is the limit” (personal communication 1996).

Subjects of this study who have contemplated the prospect of *just knowing* such a technology might someday overlay Arctic Refuge have described it as “sacrilegious as playing a video game in church.” They ask what would happen to the *essence* of wildness if they knew there were no secret places, no hidden corners along their route that aren’t digitized, thus dispelling the *sense* of mystery and the experience of exploration and discovery. The Wilderness Society vice president for Alaska states flatly, “This technology is in direct conflict with what wilderness is all about” (Smith, personal communication 1997).

Purpose

A primary purpose of this ongoing investigation is to explore the system of thought and belief that underlies objections to such potential changes to the Arctic Refuge wilderness. This paper focuses on those “impacts” that would be of little tangible significance, or none whatsoever. It seeks to describe the network of wilderness beliefs, values and attitudes that have been attributed to this expanse of mountains, tundra and forest—endowing it with a sense of place and embodying it with a set of meanings that have led to its emergence as an experiential and symbolic landscape of national significance.

Methods

In seeking to grasp the underpinnings of the perception, experience and valuation of the Arctic Refuge as wilderness, this inquiry combines elements of exploratory, phenomenological, descriptive and interpretive inquiry. It draws on three sources of data: 1) the wilderness themes found in the writings of those who were most instrumental in establishing the Arctic National Wildlife Refuge, supplemented by interviews with three of them, 2) wilderness themes identified in the popular literature subsequent to the refuge's establishment, and 3) phenomenological exploration of the perception and experience of wilderness-oriented refuge visitors who serve as case studies. The concept of environmental "meanings" (Williams and Patterson, in preparation) is employed to synthesize and describe the complex, or network, of wilderness values, beliefs, ideas, concepts, attitudes, benefits and symbolic associations attributed to the refuge by these sources.

This study identified the wilderness meanings expressed in 44 writings, using the thematic content analysis procedure described by W. Lawrence Newman (1997). Nineteen writings were authored by those considered refuge founders, and 25 are more recent popular literatures: coffee-table books, travelogues, natural histories, historic accounts and testimonies. Fourteen recurring themes (meanings) emerged from analysis of these writings. Since none of the existing generic wilderness value classification systems (Driver and others 1987; Nash 1997; Nelson 1998; Rolston 1985) seemed to fully capture the set of recurring meanings associated with the Arctic Refuge, a system specific to this place was developed.

Following Tuan (1976), such writings are considered from two perspectives. First, they serve as reflections, or indices, of meanings that a place is perceived to hold. Second, they influence the formation of meanings: for visitors, they help establish a predisposition, a perceptual readiness to experience the ideas, attitudes and feelings these meanings express.

The 14 meanings are conceptualized as the basic components of a schema representation the refuge holds for those who value it as wilderness. A schema is, ultimately, a neural network with synaptic connections that are strengthened in ways that facilitate certain perceptual tendencies. It provides:

a memory structure that develops from an individual's experience and guides the individual's response to the environment . . . the schema influences the individual not sequentially through its component pieces, but simultaneously as a total mass (Marshall 1995 p.15).

The role of the meanings embedded within the "wilderness schemas" with which wilderness-oriented visitors arrive is being explored through the perceptions and experiences of five refuge visitors who serve as case studies.

These individuals, referred to as co-researchers because of the collaborative nature of the interview methodologies, represent a criterion-purposive sample. That is, they were not selected to be a representation of refuge visitors. Rather, they were chosen because they exemplify the characteristics of interest. Selection criteria provided individuals whose attitudes toward the refuge are most aligned with the purposes expressed by the refuge founders and the provisions of the

Wilderness Act of 1964. It also provided individuals who are willing to spend 15 or more hours exploring underlying belief and value structures. Non-random samples are used in such exploratory research, where the purpose is to obtain a more comprehensive understanding of a phenomenon rather than to generalize patterns to a larger population (Newman 1997).

This multi-stage inquiry began with exploratory interviews with the co-researchers and, separately, with their spouses and trip partners. The second stage continues with a series of thematic apperception exercises. This interviewing technique is an adaptation of the Thematic Apperception Test used in therapeutic psychology to elicit underlying belief and attitude structures that patients are unwilling or unable to disclose in response to more direct methods (Henry 1967; Tomkins 1947).

Each exercise presents a large photo of a wilderness visitor and a scenario describing him or her considering some aspect of the landscape, or one of the potential technologies or actions at issue. The co-researcher writes a creative essay describing that person's response to, for example, a proposal to name a mountain in the photo. Co-researchers are asked to include in their story the beliefs, attitudes and memories the person in the photo drew upon to form their opinion of the proposal. Co-researchers are assumed to project *their* attitudes and beliefs onto the person in the photo. Interviews with a pre-test group of wilderness visitors confirmed that, like patients in therapy, subjects are often reluctant to acknowledge that *they* develop beliefs or respond to issues based on feelings or emotions, but they are more likely to attribute or project those underlying elements onto another person (in the photograph).

The resulting essays are thematized, and the themes (meanings) that emerge are explored through a series of probing, dialogal interviews. The development of questions, and the interpretation of responses, is aided by reference to the conceptual and empirical findings of a number of specialties within the area of environmental psychology.

Wilderness Meanings Associated With the Arctic Refuge

Fourteen meanings emerged from the three data sources. Four are widely associated with wilderness in the popular literature, are readily understood by managers and decision makers, and are recognized in Arctic Refuge planning and management documents (U.S. Fish and Wildlife Service 1988, 1993). These common meanings recognize the Arctic Refuge as: 1) a place for wildlife, particularly for species not tolerant of civilization, or tolerated by civilization; 2) a place of scenic values; 3) a place of scientific values; and 4) a setting for recreational activities.

Ten emergent meanings are more elusive. Their role in the establishment of the refuge, and in the experience, perception and valuation of it as wilderness, are less well understood by managers and decision makers. Each of these are briefly described by representative quotations from the historic and popular literature and interviews with co-researchers.

In considering these meanings, please keep in mind that the importance of each varies widely among individuals. No attempt was made to evaluate the relative influence of each

because, as elements of a schema structure, none operates in isolation. While description requires their separation, in the mind they form a gestalt. They meld into one another. The perceiver's conceptualization of this environment derives less from recall of individual component meanings than from an overall "impression" based on a complex and largely unconscious interaction of them.

1. The Arctic Refuge provides a connection to American cultural heritage.

This area offers what is virtually America's last chance to preserve an adequate sample of the pioneer frontier, the statewide counterpart of which has vanished.—George Collins and Lowell Sumner: *Northeast Arctic: The Last Great Wilderness* (1953, p. 26)

The idea that wilderness is a vestige of our frontier heritage was a prominent theme in several of the writings of Leopold that inspired the refuge founders (Collins, personal communication, 1999). Also influential was Robert Marshall's (1938) proposal for a permanent frontier in Alaska. "In Alaska alone can the emotional values of the frontier be preserved."

The idea of preserving a remnant of the frontier and related experience opportunities became prominent in the public testimony supporting establishment of the Arctic Refuge (Kaye 1998), and continues to resonate through the popular literature. One example, *Nameless Valleys, Shining Mountains* describes author John Milton's (1970) discovery of "wilderness on a scale the mountain men once knew in our far west" (p. 63) and his feeling that Lewis and Clark "would probably have felt much as we did" (p. 113).

Two commonalities related to this idea emerge from the co-researchers' interviews: 1) a childhood fascination with these and other frontier icons, and 2) reports of catching an occasional experiential glimpse of this past.

Author and co-researcher Debbie Miller, for example, recalls instances where she imagined, "This is what it must have been like for the early explorers . . . the feeling of exploration they must have known."

Co-researcher geophysics professor Keith Echelmeyer says "On the longer trips I get this sense of not visiting, but moving through the land as Lewis and Clark must have felt." Described as symbolic role enactment (Ittelson and others 1974) such experiences seem to be neither imagining nor a trip motivations or expectations. Echelmeyer says:

It's something that just comes to you when you don't know what's ahead. It's an understanding of what it was like to be in that era . . . It's an identity with a period I find most interesting.

Recent literature in the areas of environmental psychology (Kaplan & Kaplan, 1995) and archetypal psychology (Pearson, 1991) led to examining the role of the frontier and its explorers as more than just touchstones to this venerated past; they may symbolically represent what Olaus Murie and others considered an innate human impulse, represented by the following meaning . . .

2. The Arctic Refuge is a place of mystery and unknown, a place for exploration and discovery.

The urge to go places . . . to explore . . . to discover . . . this urge has come down to us from the earliest time and we must not

ignore it if we believe in progress of the human spirit.—Olaus Murie: *Wilderness Philosophy, Science, and the Arctic National Wildlife Range* (1961, p. 59)

This theme has recurred through the popular literature of the Brooks Range since Marshall first extolled its unknown character and "the exhilarating feeling of breaking new ground" (Marshall 1956 p. 49). Likewise, Milton (1970) was able to feel "that we might be the first white men to set foot" (p. 53). In the glossy book *Earth and the Great Weather*, Kenneth Brower (1970) revels in finding a valley "unexplored as far as we know" (p. 70). In *Midnight Wilderness* (1990), Miller describes "that exhilarating sensation that we may have walked in places where perhaps no human had ever set foot" (p. 133).

Encapsulating a theme expressed by all the co-researchers, she says

There is a tremendous sense of adventure in not knowing what lies ahead. Perhaps one of the greatest values in experiencing this primeval wilderness is the element of discovery (p.150)

This enchanting component of the refuge experience seems to arise from an aura of mystery, the sense that there is something within or beyond a scene that is not apparent. This uncertainty engages visitors' predictive and inferential capabilities, impelling them to venture forth and explore (Kaplan and Kaplan 1995).

Concern about erosion of this quality is the primary basis for co-researchers' objections to the potential electronic information technology. Expeditionary traveler and co-researcher Roger Siglin speculates that just knowing it overlays his route would erode his most memorable experiences: "discovering hidden nooks and crannies that you stumble onto."

Before his journeys, Siglin spends evenings staring at maps, planning and imagining. What would happen to the anticipation, he asks, "if I had to decide whether or not to first 'explore' the route and 'discover' the features on the computer?"

In both the refuge literature and the experiences of co-researchers, namelessness contributes to this experience. Echelmeyer says a named feature is less beckoning because "its connection to pre-modern times is lost . . . the name limits your imagination." For school teacher Frank Keim, "One can hardly explore a named mountain. I'm more inclined to climb a less attractive, but unnamed one."

But what people explore here is not just what's around the next bend or over the horizon . . .

3. The Arctic Refuge provides psychological benefits associated with solitude.

. . . but we long for something more, something that has a mental, spiritual impact on us.—Olaus Murie, *Testimony on S.1899, A Bill to Establish the Arctic Range*, (1959)

Vastness, remoteness and the separation from modern society's influence that they engender contribute to the Arctic Refuge's renown as a place of solitude, a setting particularly conducive to introspection, self-reflection, restoration and personal growth.

Solitude is a complex and multidimensional transaction between the individual and the environment (Hammit 1994; Hollenhorst and others 1994). Two cognitive dimensions well

represented in both the refuge literature and the interviews are the experience of the Flow State (Csikszentmihalyi 1990) and Cognitive Freedom (Hammit 1994).

Flow experience characterizes Murie's (1957) description of the refuge as "a world that compelled all our interest and concentration and put everything else out of mind" (p. 275). Co-researchers describe frequently experiencing the components of flow: absorption in the experience, an exclusion of irrelevant concerns, the coalescence of their actions, intentions and thoughts into a single theme, and a sense of freedom from social norms and controls. In this state, Milton's (1990) problems "take on new form and perspective." He is more able to separate "the meaningful from the meaningless" (p. 129).

Echelmeyer describes how after a few days "I become part of the place . . . you're not traveling on it, you're flowing with it." His internal dialogue changes. He finds that "the extraneous things that get in the way of what's important fade away."

Flow facilitates cognitive freedom, a lessening of the influence of social norms and roles, an enhanced freedom to direct one's attention and thought to what is interesting and relevant. (Hammit 1994). For Echelmeyer

I lose my self-image. It's like being a kid. I don't worry about what anyone else might think . . . there's this freedom to think about things on a different level . . . to get to know yourself and how you fit into things.

Co-researchers find this state heightened in the context of "route-finding," Echelmeyer's word for exploring. Interviews suggest that the process of getting from one place to another facilitates the process of getting from one way of thinking to another.

Echelmeyer reports that this effect is notably lessened in other areas where signs point the way. Even the unseen presence of place names diminishes this quality of solitude because "their purpose is to influence and control your thinking." As he describes it, such human intentionality is incongruent with a place that fundamentally represents freedom from human influence and control.

4. The Arctic Refuge is a place of wildness, a state where nature is uncontrolled and free to continue along its evolutionary pathway.

[The Arctic Refuge] symbolizes freedom . . . freedom to continue, unhindered and forever if we are willing, the particular story of Planet Earth unfolding here . . . free from the meddling human concerns . . . where its native creatures can still have freedom to pursue their future, so distant, mysterious . . .—Lowell Sumner, Arctic National Wildlife Refuge Address (1985)

For Marshall (1956), a condition central to wilderness was "its entire freedom from the manifestation of human will" (p. xxxii). That essentially defines "untrammelled," a word he used repeatedly in reference to the Brooks Range and which became a key descriptor in the Wilderness Act.

Olaus Murie (1961) described the campaign to establish the refuge as the "basic effort to save a part of nature, as evolution has produced it" (p. 2). Justice William O. Douglas (1960) wrote that the refuge "must forever remain . . . where the ancient ecological balance provided by nature is maintained" (p. 30).

In the popular literature, Brower's account of traversing the refuge describes him pondering "connections to the beginnings of life that wilderness has so far preserved." He asks, "Do we really want to repudiate the evolutionary force?" (p. 14). Milton (1969) expresses the hope that "man continues to have the good sense to allow some of the earth to go its own way" (p. 63). Likewise, Miller's book (1990) emphasizes that "it is this spirit of pure wildness . . . that lingers on in our hearts and mind" (p. 133).

Common across all co-researchers' accounts is the notion that wildness, often held just at the edge of conscious awareness, is the characteristic that sets the refuge experience apart from others. Interviews suggest that it deepens the experience of solitude.

Co-researchers report they wouldn't think to include wildness if asked to provide a list of trip attributes. Yet most, like Siglin, indicate that it is always in the back of their mind. He compares his trips in the refuge to those in Grand Teton Park, which he says has far more spectacular scenery. But he knows the park is neither as ecologically intact nor as free of human intentionality. Thus, in comparison with the Brooks Range, he says, "Teton Park has preserved the body of wilderness, but not the soul."

5. The Arctic Refuge provides a connection to the natural world and our species' evolutionary past.

Before discussing the Arctic Range in detail, let me first consider how it happens that we want wild country. We came by this urge through evolution.—Olaus Murie: Wilderness Philosophy, Science, and the Arctic National Wildlife Range, (1961, p. 58).

In this introduction to his presentation to the Alaska Science Conference, Murie echoed sentiments that were often expressed by Marshall and Leopold, and that continue to resonate through refuge writings and interviews.

While crossing the Romanzof Mountains, Milton (1969) pondered the importance of wild places where one "can relearn what he is and where he came from" (p. 63). Wright (1973) tells readers that wilderness needs to be preserved "as a laboratory in human values . . . a place where man discovers firsthand the kinships, harmonious interdependencies, the essential connections of all life systems" (p. 135). Hiking across the refuge's coastal plain, Miller (1990) experienced "an overwhelming sense that we have been thrown back to a more primitive age" (p. 4).

Keim describes how when he is "out long enough to feel like I'm just part of the country" (flow experience), he senses being "back in touch . . . with where I came from and where I'm going." Interviews suggest that as with many wilderness meanings, this connection more often enters awareness retrospectively. "Out there it's more of a feeling than a subject of thought," Keim says. An avid reader of nature books, he describes how a sense of connection or relatedness to the distant past "comes back to you" when he reads or rereads John Muir, Edward Abbey, Aldo Leopold and Margaret Murie. His wilderness trips provide contextual images through which he interprets the messages of these writings and connects them to his life.

Co-researcher and hunting guide Sandy Jamieson describes the "primal sense of hunting" as what distinguishes his hunts in the refuge from those in non-wilderness areas. He vividly recalls one of his peak experiences, watching

caribou from a hilltop, “a time machine experience that can transport you back in time before the world was altered.” Sensing the outside world loosening its grip on him, Jamieson said. “I felt a part of that mysterious force that moves the caribou,” “For those few days of my life, I was a part of the natural order of things.” That experience continues to remind him that “there is still that ancient quest in us.”

6. The Arctic Refuge is a place to approach and experience humility.

A poetic appreciation of life, combined with a knowledge of nature, creates humility, which in turn becomes the greatness in man.—Olaus Murie: *Journeys to the Far North* (1973, p. 245).

Co-researchers report that the refuge experience provides new perspectives, that they can see themselves in proportion to something they perceive to be greater than modern society and its creations. This meaning is often manifest in the “diminutive effect” (Gallager 1993) experienced in the presence of monumental or vast landscapes. As expressed by Marshall (1956): “As I walked for hours beneath the stupendous grandeur of these colossal mountains, I felt humble and insignificant” (p. 22). The refuge also invites comparison of the human life span with geologic time. Miller (1990), for example, describes the centuries-old lichens and multi-million-year-old rocks that “make me feel as insignificant as a speck of dust” (p. 153).

This meaning is also manifest as a broadening of identity, seeing oneself as a small part of a greater community of life. As expressed by Douglas (1960): “Here [a person] can experience a new reverence for life that is outside his own and yet a vital and joyous part of it” (p. 31).

Evidence of such feelings has been found in the experiences of all co-researchers, yet none reports seeking them. Humility seems to be an emergent quality which, as Echelmeyer says, “just comes to you.”

He provides examples of how these feelings are lessened in the presence of technology, because “technology is about changing things, not accepting things as they are in nature.” He no longer carries a firearm for bear protection because “a gun puts you in control of the bear, above it...you lose that sense of vulnerability...the feeling of smallness.”

Keim describes his experiences as “a personal paradigm shift” in which he is at once humbled and empowered by the realization that “we are a part of something that’s much greater than us.” It is a realization that “just doesn’t come to you in normal life.”

7. The Arctic Refuge is a place of intrinsic value.

Wilderness itself . . . does it have a right to live? Do we have enough reverence for life to concede this right?—Margaret Murie: *Two in the Far North* (1957, p. 374)

This meaning is often expressed in terms of the individual’s satisfaction in just knowing this area exists. However, the meaning is also represented by the Leopoldian notion that nature can have worth in itself, not contingent upon any human benefit.

Milton, for example, describes the popular reasons for preserving wilderness, such as recreation, as secondary values of the refuge. “But that is not the purpose of this place,” he writes. “It’s purpose is to *be*. Man’s role should be

...let it be” (p. 105). Similarly, during his trip, Brower (1970) realizes that wilderness should be left “to serve its highest purpose—being there for itself and its indigenous life forms” (p. 14).

Co-researchers express similar sentiments. Keim, for example, expresses strong disagreement with the idea that the refuge should be managed to provide human benefits. He advocates placing some large portion of the refuge off-limits to all human use as “a gesture of respect for uncontrolled nature.” During his trips, he says there’s a “background voice” reminding him “you’re just a guest up here...a completely and totally privileged guest.”

8. The Arctic Refuge is a bequest to the future.

I feel so sure that, if we are big enough to save this bit of loveliness on our earth, the future citizens of Alaska and of all the world will be deeply grateful. This is a time for a long look ahead.—Margaret Murie: *Testimony on S. 1899, A Bill to Establish the Arctic Range* (1959, p. 60)

“Future generations” is an oft-repeated phrase in the Arctic Refuge literature and interviews, and a concern related to most other meanings. It is most often expressed as a moral obligation to provide future generations the experiential and other benefits the refuge provides.

Thus, Olaus Murie (1961) sought to “let people of the future have a little opportunity to go to the wilderness to have the inspiration that comes with the frontier” (p. 68). As Brower (1970) expressed it, we must “find the grace to leave the arctic as we found it...for the next people to pass that way” (p. 181).

Related is the “option value” of wilderness, the notion that development would deprive subsequent generations the opportunity to choose, whereas preservation maintains that opportunity. This is represented by Wood’s (1958) statement that the refuge could be considered a “mineral bank” for future generations. “But shouldn’t we allow them to make the choice?” she asks. (p. 1). An argument Margaret Murie (1959) offered for preservation was “so that those of the future may have the choice to keep up, or use up” (p. 60).

Miller (1990), who dedicated her book to her young daughters “and future generations of wilderness seekers,” notes that bequest value becomes an increasingly important aspect of the refuge as she matures. Like other co-researchers, she tends to use the word *timeless* in relation to bequest value, explaining that the concept of timelessness connects past ages with the future.

9. The Arctic Refuge is a place of restraint.

. . . this attitude of consideration, and reverence, is an integral part of an attitude toward life, toward the unspoiled, still evocative places on our planet. If man does not destroy himself through his idolatry of the machine, he may learn one day to step gently on his earth.—Margaret Murie: *Two in the Far North* (1957, p. 289)

This meaning is largely expressed as the boundaries of the Arctic Refuge symbolizing the boundaries our society is able to place on development and the use of technology. With Leopold, Marshall (1933, 1956) disparaged mechanized access to wilderness, less because of physical impacts than because of the impact he believed the presence of technology had on a person’s way of thinking and the sense of isolation and unknown they dispel.

Similarly, Wright (1973), describes her repulsion in encountering a helicopter west of the refuge boundary. She says it was not the “screaming whine” of the helicopter that bothered her as much as the machine as “a symbol of human choices.” “It is the values guiding those who decide what use to make of this supercraft, this symbol of the incredible power and accomplishment of our technology, that disturbs me...” (p. 221).

The use of snowmachines in the refuge (allowed by the Alaska National Interest Lands Conservation Act) disturbs Siglin as well. “They contradict the idea of wilderness.” Yet while Siglin believes they should be prohibited in all wilderness, he has used them in the refuge. In fact, contradictions are acknowledged by all co-researchers, and they illustrate an important point: As do systems of religious belief, this wilderness ideal often includes inconsistencies. As with religious belief, the wilderness ideal is not a linear system of logic. Its function as a framework for perception and experience and as a guide to behavior is, like the Lutheran or Catholic’s faith, accompanied by an occasional discrepancy. Inconsistencies are a reminder that the set of meanings that form this wilderness ideal are, foremost, a human construct.

10. The Arctic Refuge is a sacred place.

... this last American living wilderness must remain sacrosanct.”—Justice William O. Douglas: *My Wilderness* (1960, p. 31)

Douglas’s writings echo the common sentiment that this place connects people to—allows them to participate in—something they perceive to be of a more timeless and universal significance than modern society and its creations.

For some, this sacredness is a religious connection, such as that expressed by John Muir. But most co-researchers are not followers of any doctrinaire religion. They characterize sacredness in the more secular, universal sense of the concept, described by Emile Durkheim as that which is set apart as the embodiment of ideals (Pickering 1975). For the founders, that ideal was largely rooted in the creative process of evolution. Thus, for Olaus Murie (1961), the campaign to establish the Arctic Refuge was “this basic effort to save part of nature, as evolution has produced it” (p. 2). As Lowell Sumner (1985) expressed it, the refuge was to be a landscape where people of the present and future can

be inspired, and understand a little of the majestic story of evolution, but also where we can learn to appreciate and respect the intricate and inscrutable unfolding of Earth’s destiny.

Hunter Sandy Jamieson describes his refuge experiences as a connection to “what it is that nurtured us and brought us to who we are and where we are.” Unaltered, wild country is where we are most likely “to learn things about ourselves and our relationship to the planet.” He believes humans have an indwelling “yearning to connect to something beyond your life and lifetime.” “That’s what people want out of religion,” he says. “It’s what I find in wild country with wild animals.”

For teacher Frank Keim, the refuge is a medium through which our evolutionary continuity with the natural world is most apprehensible. His trips “bring it home to you that we’re not the purpose of it all . . . it puts me back in touch with where I came from, where I’m going.” He says he becomes

“more little, but deeper as a person” when surrounded by “the ultimate processes and conditions we evolved from.” “To experience that,” he says, “is among the highest values of this place.”

Conclusions

The Arctic Refuge has become a condensation symbol, summarizing and evoking an array of experiential and symbolic meanings. But this fact is not posited as a decisive argument against development, new technologies or other actions. Rather, the components of this system of meaning are only some among many values that need to be considered in developing policy on where – or whether – to draw the line on such actions here. Two premises underlie this inquiry: 1) Public policy is best served when the full spectrum of both the benefits and the costs of an action are considered, and 2) some wilderness qualities receive less than fair consideration because the measurement, description and comparison of environmental costs and benefits are carried out within a management paradigm historically insensitive or inimical to many core wilderness values. The benefits of actions that impact wilderness values are better represented. This investigation seeks a more equitable understanding of those “intangible resources” Olaus Murie spoke for that may be diminished or lost.

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