

Beyond Leave No Trace

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ABSTRACT *Leave No Trace (LNT) has become the official education and outreach policy for managing recreational use in parks and wilderness areas throughout the United States. It is based on seven core principles that seek to minimize impacts from backcountry recreational activities such as hiking, climbing, and camping. In this paper, we review the history and current practice of Leave No Trace in the United States, including its complex role in the global political economy of outdoor recreation. We conclude by suggesting a new framework for building on the successes of Leave No Trace, while moving beyond its self-imposed limitations, and recapturing wilderness recreation as a more collaborative, participatory, productive, democratic, and radical form of political action.*

Introduction

To the average wilderness recreationist, Palisade Basin seems a world apart. Nestled between 14,000-foot peaks in the John Muir Wilderness of California's High Sierra, its crystalline lakes, colorful meadows, and cascading streams appear to have changed little over the past 150 years, even as human activities transformed the surrounding region. One expects to see the grizzled figure of Muir himself ambling over the granite outcrops while extolling the virtues of beauty, solitude, and wild nature. Many travelers can still remember his sage advice: 'go to the mountains and get their good tidings'.

The appearance of Palisade Basin, however, is a complicated matter that has as much to do with human history and geography as it does with wild nature. During the 1970s, millions of Americans took Muir's recommendation and ventured into the backcountry. The High Sierra had undergone decades of grazing, logging, mining, fire suppression, predator elimination, hydrologic engineering, and air pollution. Yet, to most new visitors, the region still appeared untouched by human action, and the ecological conditions they experienced there became their benchmarks for pristine wild nature. But as formerly remote areas, such as Palisade Basin, attracted throngs of wilderness recreationists, the landscape began to show new signs of change: erosion, pollution, overcrowding, and conflicts between humans and wildlife. In 1990, wilderness advocates throughout the United States came

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together to develop a new educational initiative for reducing these unintended negative consequences of backcountry recreation. They called their program Leave No Trace (LNT).

Over the past two decades, LNT programs have met with considerable success. Leave No Trace has become the official education and outreach policy for managing recreational use throughout the US National Wilderness Preservation System. This System includes more than 702 federally designated wilderness areas—administered by the US Forest Service, National Park Service, Bureau of Land Management, and US Fish and Wildlife Service—covering over 107 million acres in 44 states. State and local park systems throughout the United States have adopted the Leave No Trace program. Corporations in the outdoor recreation industry have sponsored LNT programs that have raised awareness, and helped reduce ecological damage caused by recreational activities in parks and wilderness areas. As a result of these achievements, Leave No Trace has become widely accepted as a popular, common sense, and uncontroversial environmental ethic. It has joined the ranks of well-known phrases such as ‘think globally, act locally’ and ‘give a hoot, don’t pollute’ to become one of the most recognizable environmental slogans in American culture. Leave No Trace has come to represent a sanctioned, honorable way of experiencing parks and wilderness for millions of people.

Yet, as a practical environmental ethic, Leave No Trace disguises much about human relationships with non-human nature. For more than a generation, social scientists have been critiquing the idea of wilderness (Callicott & Nelson, 1998; Lewis, 2007). Historians, geographers, philosophers, and anthropologists have argued that the representation of parks and wilderness areas as pristine nature erases their human histories, and prevents people from understanding how these landscapes have developed over time through complex human–environment interactions. They also contend that the notion of parks and wilderness areas as islands of nature obscures their spatial connections with the surrounding landscape. According to the historian William Cronon (1995), this view of wilderness as pure and isolated has encouraged preservationists to fetishize remote parks and wilderness areas instead of working to improve the urban and suburban environments in which most Americans actually live. These scholarly critiques suggest the need for a new environmental ethic that builds on the successes of the Leave No Trace program, but goes beyond its current, self-imposed limitations.

This paper argues for a new environmental ethic that transforms the critical scholarship of social science into a critical practice of wilderness recreation, addresses the global economic system that makes contemporary wilderness recreation possible, and reinvents wilderness recreation as a more collaborative, participatory, productive, democratic, and radical form of political action. In the following pages, we review the history and practice of Leave No Trace in the United States, highlight its successes, consider its implicit assumptions about environmental history and geography, and offer a new vision for a twenty-first century environmental ethic. Wilderness recreation is not just an ecological or spiritual pursuit. It is also a social and economic activity—an industry—with a global reach that extends from alpine summits to urban retail outlets, open ocean shipping lanes, factory floors in developing nations, and oil fields around the world. An environmental ethic for parks and wilderness areas for the twenty-first century

must consider not only the immediate consequences of backcountry camping, but also outdoor recreation as part of an economic system that includes global chains of production and consumption with social and ecological consequences extending far beyond the park or wilderness boundary.

The Origins of Leave No Trace

The Leave No Trace program emerged at the confluence of two interrelated trends in recent American environmental history: the tremendous increase in wilderness visitation and the development of a vast outdoor recreation industry. In order to understand how 'primitive' recreation intersected with a mass consumer culture, we need to look back to a time before mandatory wilderness permits and on-line camping superstores. The celebration of wilderness as a space of recreation—dedicated to frontier survival skills, blood sports, and primitive travel—dates to the nineteenth century. Authors who supported wilderness recreation in the name of masculine renewal, such as Theodore Roosevelt and Sigurd Olsen, have received criticism from scholars in gender and environmental studies who have associated their writings with patriarchy, elitism, racism, and the domination of nature.¹ Yet, according to the historian James Morton Turner, between the 1890s and the 1930s the American woodcraft movement adopted a more radical political agenda (Turner, 2002). The woodcraft movement rejected the increasing artificiality of American consumer culture, and its abundance of fabricated goods, in favor of traditional crafts and backwoods skills.

Before the passage of the Wilderness Act of 1964, the number of people visiting federally designated wilderness areas in the United States remained relatively small. This changed in the years afterward, when members of the baby boom generation began to forge out in search of a back-to-nature experience. In less than a decade, recreational use of National Forest wilderness and primitive areas tripled, with even greater increases at many popular sites. This situation led the historian Roderick Nash to conclude, famously, that for the first time in history Americans were 'in danger of loving their wilderness to death' (Nash, 1967).

Loving the wilderness to death involved changes in both the biophysical environment and the wilderness experience (Cole, 1987). Soil compaction had increased near popular campsites, and erosion posed a problem along steep mountainside trails. Campers trampled native vegetation, and their conflicts with wildlife increased as the animals became habituated to human food (Cole, 1995). Many members of this new wilderness generation had no sense of backcountry etiquette, and their destructive practices and misadventures were damaging the landscape. Agency officials, recreationists, and wilderness advocates soon began to seek solutions to these myriad problems through a combination of innovation, regulation, and education.

The remarkable growth of backcountry recreation could not have occurred without the aid of technological innovation. Beginning in the 1970s, high technology consumer goods, composed mainly of synthetic materials derived from petroleum, came to mediate almost every aspect of the American wilderness experience. GORE-TEX jackets, Vibram rubber soles, foam sleeping pads, nylon tents, portable cooking stoves, and hand-held water purification devices proliferated as the market

for camping products exploded, and as firms cultivated new consumer needs through technological advancements and marketing.

These products offered the promise of adventure, enjoyment, and a connection to nature. But they also conveyed the contradictory message that too close of a connection might prove dangerous for both people and the environment. Whereas portable camping stoves and freeze-dried dinners promised to protect nature from people, synthetic garments and water purifiers promised to protect people from nature. The woodcraft tradition had seen technologies, such as the automobile, as threats to traditional cultures, experiences, and knowledge (Sutter, 2002). But during the 1970s, the new wilderness generation began to view technology as a necessary component of wilderness travel. The notion that high-tech clothing and camping equipment created an indispensable protective buffer between nature and people soon became a central, albeit tacit, feature of efforts to protect parks and wilderness areas from the harmful effects of mass recreation.

One of the first attempts to regulate the recreational use of backcountry areas began on land administered by the Bureau of Land Management (BLM) in the California desert. In 1973 the BLM developed a management plan that restricted off-road vehicle use, and led to the closure of the infamous 'Barstow to Vegas' cross-country motorcycle race in order to reduce impacts on the desert landscape (Nystrom, 2003). Other agencies established regulations that included both motorized and non-motorized recreation. Before 1975 the US Forest Service and National Park Service used voluntary wilderness permits to gather information, but later both agencies began issuing mandatory permits as a way to limit backcountry access. Popular alpine summits, such as Mount Whitney in California, and whitewater rafting corridors, such as the Grand Canyon in Arizona, were among the first American wilderness areas subjected to user quotas (Nash, 1967).

A number of publications also appeared during this time that promoted an educational, rather than a regulatory, approach to managing recreation in wilderness areas (Hart, 1977; Pedzolt, 1974; Waterman & Waterman, 1979). In 1979 James Bradley, of the US Forest Service, authored an influential paper calling for an education based approach to reducing the negative effects of backcountry recreation (Bradley, 1979; Marion & Reid, 2001). Bradley argued that regulations alienated users, most impacts resulted from ignorance rather than malicious acts, and law enforcement was extremely difficult due to the nature of the activities and landscapes involved. Several conferences, research projects, and pilot programs followed. In 1991, the US Forest Service signed a Memorandum of Understanding with the National Outdoor Leadership School (NOLS), an international outdoor skills and adventure travel academy based in Wyoming, stipulating that the two organizations would work together to develop a low-impact camping program similar to the educational programs the Forest Service had developed to combat litter and fires.

In 1993 NOLS, the US Forest Service, the Outdoor Recreation Coalition of America, and the Sporting Goods Manufacturing Association convened a summit to discuss the future of the outdoor industry and the Leave No Trace program. The following year, these groups founded the non-profit organization LNT, Inc., which later became the Leave No Trace Center for Outdoor Ethics (LNTCOE), to administer the program on behalf of its sponsors in the governmental, industrial, and non-governmental sectors. In the years since, the three other federal agencies

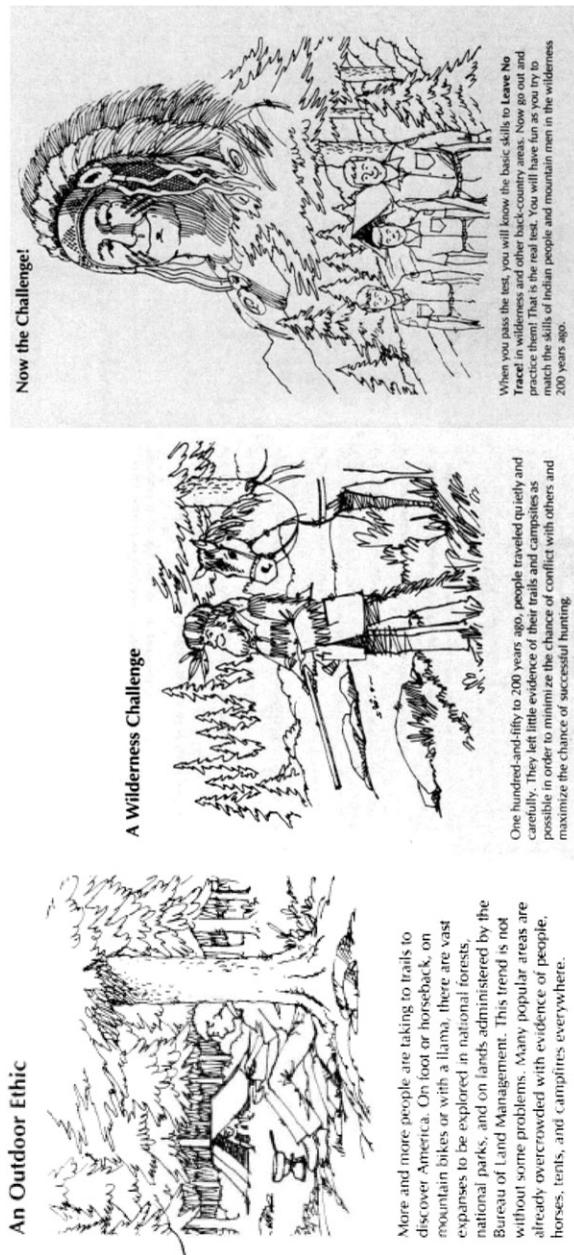


Figure 1. Panels from US Forest Service (1992), *Leave No Trace!* A program to teach skills for protecting the wilderness environment.

that administer wilderness areas in the United States—the Bureau of Land Management, the National Park Service, and the US Fish and Wildlife Service—have signed memoranda endorsing the LNTCOE program and pledging their participation. In 2007 LNTCOE signed a similar agreement with the National Association of State Parks Directors, which includes the heads of the park systems for all 50 US states and the Commonwealth of Puerto Rico. Leave No Trace is now the official educational policy for managing outdoor recreation, not only on the entire National Wilderness Preservation System, but also on a wide range of public lands administered by federal, state, and local governments.

The Practice of Leave No Trace

Today, Leave No Trace encompasses a diverse set of programs and practices that connect recreationists with the products and institutions that shape their wilderness experience. All of these programs are based on the seven core principles that emerged out of the cooperative efforts of the 1990s, and that seek to minimize human impacts associated with mass recreation in parks and wilderness areas. A list of the seven core Leave No Trace principles appears in Figure 2. Specific LNT recommendations, such as how to best dispose of human waste, vary for different areas. But these seven core principles serve as the heart of the LNT program, and they are broad enough to apply in any backcountry landscape. In general, the seven core principles encourage wilderness recreationists to concentrate their activities in heavily used areas by staying on trails and using established campsites, respect their surroundings and other visitors by remaining as inconspicuous as possible, and avoid unpleasant or desperate situations by bringing appropriate gear, following established routes, and acknowledging their physical limits (McGivney, 2003).

Leave No Trace programs designed around these seven core principles connect dozens of corporate, government, and non-governmental organizations. At the hub of this network is the Leave No Trace Center for Outdoor Ethics, which coordinates LNT related activities and works to increase the program's visibility through education and outreach. LNTCOE develops and disseminates publications, oversees educational programs, works with government and corporate sponsors, and enrolls new LNT partners, donors, educators, and students. Representatives from each of the four federal agencies serve as members on LNTCOE's Advisory and Educational Review Committees.

- Travel and camp on durable surfaces
- Plan ahead and prepare
- Be considerate of other visitors
- Respect wildlife
- Minimize campfire impacts
- Leave what you find
- Dispose of waste properly

Figure 2. The seven principles of Leave No Trace.

Numerous firms in the outdoor recreation industry participate in Leave No Trace programs. These include gear and clothing manufacturers such as Coleman and The North Face, media outlets such as *National Geographic* and *Outside* magazines, and entertainment corporations such as The Walt Disney Company. In 2007 representatives from L.L. Bean, Subaru of America, and Recreational Equipment Incorporated (REI) served as members of LNTCOE's Board of Directors. Several of these companies coordinate LNT related service projects, such as the restoration of denuded camping areas and the removal of exotic plants. In exchange for their service and donations, the names of these corporate sponsors appear in LNTCOE print publications and Internet sites, and the firms use LNT language and logos in their marketing campaigns.

This relationship provides LNTCOE's sponsors with several benefits and opportunities. It enables their employees to participate in volunteer activities that steward the land, and to engage in a non-controversial form of environmental activism. It also presents the sponsors with an opportunity to improve their public image, branding, and sales through the cultivation of green corporate profiles. For example, the National Geographic Society's family of print and Internet publications benefits from exposure to wilderness enthusiasts who may become subscribers, and to other firms that may choose to advertise in their pages. The end result, as James Turner has suggested, is the establishment of a Leave No Trace network, comprised of public and private institutions, that allies 'the modern backpacker with the wilderness recreation industry', and offers consumption as an antidote to land degradation.

Guide schools and outdoor education programs, such as the National Outdoor Leadership School and Appalachian Mountain Club, handle much of the educational work for the Leave No Trace program. These organizations conduct accredited, multi-day LNT Master Educator courses for outdoor industry employees and land managers. To date, more than 2,700 students representing all 50 US states have completed LNT Master Educator courses. Graduates of these courses may go on to teach shorter training and awareness workshops. The Boy Scouts of America, with more than 5.6 million members, has made Leave No Trace a required part of its curriculum. The group issues Leave No Trace Achievement Awards to scouts that complete an LNT lesson plan and service project. LNT Master Educators train the staff of the Girl Scouts of the USA, YMCA, Outward Bound, the Backcountry Horsemen, and dozens of university affiliated outdoor adventure programs (Boy Scouts of America, 2008). LNT Master Educators also work with permit holders for art and music events on public lands, such as the annual Burning Man Festival in Nevada. Subaru of America sponsors a Subaru/LNT Traveling Trainer Program, which funds two teams of Master Educators to travel around the country (in their Subarus) giving LNT presentations to youth programs, outfitters, and schools.

Although many wilderness enthusiasts become familiar with LNT principles through these structured educational programs, the typical recreationist encounters Leave No Trace in less formal settings. Indeed, the power of the Leave No Trace message derives in part from its ubiquitousness in the spaces where contemporary Americans experience wilderness. These include retail stores, ranger stations, and

of course wilderness areas. From cash register to campsite, wilderness enthusiasts learn to understand and identify with the principles of Leave No Trace.

Shopping for outdoor clothing and gear has become as much a part of the American wilderness experience as hiking, rafting, or mountaineering. Retail outdoor stores and the products they carry are designed not only to fill certain needs, but also to evoke sentiments and arouse desires. When recreationists enter a retail outdoor store, such as REI, they experience a barrage of sensory stimulants, marketing campaigns, and product placements. In this context, the LNT logo becomes both a corporate brand and an official stamp of approval. It appears emblazoned on water bottles and Frisbees, stitched into hats and t-shirts, and printed on the covers of guidebooks and how-to manuals. Overhead, glossy large-format posters depict hikers, snowboarders, and kayakers fitted with the latest gear. The expense is considerable, but so are the promises of health, freedom, beauty, longevity, happiness, even redemption. The shopping mall becomes an arena not just of commerce, but one of moral discourse in which consumption provides a means of producing ethical subjects: people who will purchase certain products in order to reconcile their relationships with nature and live a more principled life. For most shoppers, this is a positive experience.

The ranger station is where Leave No Trace enters the bureaucratic realm of the regulatory and administrative state.² Consider the experience of walking into the Interagency Ranger Station in Mammoth Lakes, one of California's most popular mountain vacation areas. Visitors will find LNT pamphlets offering cautionary tales about the pernicious impacts of recreation on the fragile alpine landscape, and practical suggestions for a personal environmental ethic. Overnight travelers are required to purchase a permit and obey trail use quotas. Upon selecting a trailhead and route, campers get an official introduction to Leave No Trace. Some national parks, such as Glacier National Park in Montana, require visitors to view LNT instructional videos. At Mammoth Lakes, rangers review LNT principles and discuss regulations pertaining to campfires, human waste disposal, and the newer mandate to protect wildlife by carrying bear resistant food canisters. Visitors pledge their cooperation by signing the permit. Wilderness campers leave the ranger station ready to put the principles of Leave No Trace to practice.

When backcountry enthusiasts arrive at the High Sierra trailhead, they receive another lesson in proper conduct. Trailhead kiosks remind visitors that they are entering a wild place where they must care for the fragile landscape if they hope to protect it for future generations. Once on the trail, visitors see signs instructing them not to build campfires above 10,000 feet (3,048 meters). They may encounter one of the rangers who traverse the region's most popular trails checking permits and giving advice about how to reduce their impact on the landscape.

Due to perennial staffing shortages the chances of meeting a ranger on the trail are low, and travelers have innumerable opportunities for transgression. Yet, the millions of travelers who visit American wilderness areas for the most part manage not to destroy the places they love (Marion & Reid, 2007). This is the great achievement of Leave No Trace. Even with minimal enforcement, many people who enter wilderness areas after being exposed to LNT programs show a greater respect for the land. They do so because they have become educated. They do so in order to avoid appearing irresponsible, and to set a good example for others. They do so in

order to maintain access to wild areas, and to protect their well-being. They do so because practicing LNT has become a part of their identity as an educated outdoor enthusiast. They do so because LNT has become an essential part of the American wilderness culture and experience. They do so because they have seen—or perhaps feel responsible for—the degradation of beautiful places that occurred in a less enlightened time.

Leave No Trace has accomplished much in its short history. It has grown into a diverse and widely adopted set of programs, policies, principles, and practices. LNTCOE and other organizations have used education to prevent erosion, protect wildlife, and promote the adoption of etiquette appropriate for a more crowded backcountry environment. Longitudinal studies have even suggested a direct link between low-impact educational programs and the recovery of denuded backcountry sites in popular parks and wilderness areas such as Yosemite (Boyers *et al.*, 2000).

The story of the intestinal parasite, *Giardia lamblia*, provides one intriguing example. During the 1980s, it became a matter of fact that humans and domestic animals had introduced *Giardia* into lakes and streams throughout the American West. Even the purest waters were deemed unsafe to drink. Little research supported this assumption, but the scare over backcountry water quality inspired the development of an entire industry dedicated to chemical purification and handheld filtration devices. Recent research has suggested, however, that government agencies and water purification companies overstated the *Giardia* problem. After more than three decades of intensive recreational use, the water at many popular backcountry campsites in the High Sierra and elsewhere remains uncontaminated (Carle, 2004). *Giardia* was probably never very common in the region. But LNT's focus on the proper disposal of human waste has almost certainly helped prevent water pollution in popular backcountry areas. The story of *Giardia lamblia* provides an example of how education, regulation, and innovation have emerged as the primary tools for the governmental, non-governmental, and corporate management of wilderness recreation in the United States.

The Problems with Leave No Trace

Despite the many achievements of LNTCOE and its partners, Leave No Trace contains two major conceptual flaws that limit its scope and impact as a practical environmental ethic. Both of these flaws stem from the fact that Leave No Trace focuses on the immediate, local impacts of recreational use while ignoring larger issues of change over time and connections through space. These are, essentially, problems of scale. Leave No Trace fails to promote the kind of multi-scale, 'think globally, act locally', environmental ethic that has become commonplace within North American environmental discourse. This is particularly important during a time when the same outdoor recreation industry that helped to create the Leave No Trace program, also participates in global circuits of capital, with social and ecological consequences extending far beyond the wilderness boundary.

First, Leave No Trace encourages a presentist view of wilderness landscapes. The presentist perspective assumes that the current state of wilderness areas represents their natural, pristine condition. Another version of this view holds that the most natural, pristine version of nature is not today's wilderness, but rather the

one encountered by the area's first white explorers. Each of these ahistorical arguments disregards the fact that wilderness areas, like all cultural landscapes, have changed over time through complex human–environment interactions. According to the historian William Cronon, the idea of wilderness as pristine and timeless nature ‘represents a flight from history’ (Cronon, 1995; Braun, 1997). For Cronon, the notion that wilderness areas have somehow avoided the long sweep of human history, and can be shielded in perpetuity from human influence, is a fantasy. All landscapes now designated as parks or wildernesses were once sites of human habitation and productive labor (Denevan, 1992). Even the High Sierra's alpine meadows accommodated several decades of seasonal sheepherding—an intensive land use that transformed their soil and vegetation, and shaped the landscape that recreationists visit today.

The presentist view of wilderness does more than obscure history. It also encourages the belief that, by following a few simple rules of camping etiquette, recreationists ‘protect natural lands from recreational impacts while helping maintain access for recreation and enjoyment’ (LNTCOE, 2008). This approach will appeal to those who believe in personal responsibility as a solution to environmental problems. Yet, recreation is only one of many forces causing ecological change in wilderness areas. Climate change, air pollution, exotic species, plant pathogens, and misguided management schemes have transformed most American wilderness landscapes. These changes have already rendered some popular parks and wilderness areas less conducive for backcountry recreation.³

Consider the case of the whitebark pine (*Pinus albicaulis*), a common tree species that occurs in subalpine environments throughout the North American West. The whitebark pine's habitat is one of the most protected on Earth. Approximately 98% of its range in the United States lies on federal land, and about 50% in designated wilderness areas (Keane, 1999). In recent decades, however, mountain pine beetles and an exotic pathogen called white pine bluster rust have decimated whitebark populations in the Rocky Mountains and Cascades Range. The causes of these infestations are complex, but researchers have pointed to climate change and fire suppression as probable culprits (Tomback *et al.*, 2001). Subalpine landscapes where whitebark pines have died in large numbers have undergone dramatic ecological changes, and they have become more hazardous and less attractive for recreation. The whitebark pines in Palisade Basin remain unaffected, but many foresters believe it is only a matter of time until the beetles and blister rust arrive in the High Sierra.

Addressing complex environmental changes, such as that of the whitebark pine, will require a rigorous understanding of history, geography, and ecology. It will also require planning, regulation, management, and restoration led by the government agencies that have the responsibility for the administration of the public lands. Yet, when proponents of Leave No Trace construct wilderness areas as pristine and timeless natural lands, where recreation is the only legitimate activity, they obfuscate the changes occurring in the landscape, and they discount the possibility of an effective response. Parks and wilderness areas will continue to change in the future, as they have throughout history. Only the collective power of democratic governance—with participation by individuals, NGOs, public agencies, and private

firms—can foster the long-range planning and adaptive management necessary to meet these challenges.

The second major conceptual problem with the Leave No Trace environmental ethic is that it obscures the spatial connections between what takes place inside parks and wilderness areas and what occurs outside. Scale does not exist independent of the social and cultural processes that define it (Smith, 1993; Swyngedouw, 1997; Marston, 2000). Scale constructions are produced and given meaning through political discourse, and it is through political processes that they become instantiated in formal governing policies (Delaney & Leitner, 1997). Park and wilderness designations, which take the form of lines on a map, represent one such scale construction. They are the products of competing political agendas, and of a longstanding debate over which kind of landscapes warrant our most vigilant protection and our greatest ethical concern (Havlick, 2006).

Leave No Trace has reproduced this scale construction by limiting its ethical purview—and its definition of ‘trace’—to parks and wilderness areas. Proponents of Leave No Trace never set out to transform environmental thinking and practice beyond the boundaries of parks and wilderness areas, and to critique LNT on these grounds would be unfair. But if global chains of commodity production and consumption make the contemporary American wilderness experience possible, then LNT offers an incomplete account the social and ecological consequences—the traces—that stem from outdoor recreation and extend far beyond the park or wilderness boundary (Hartwick, 1998, 2000; Hughes & Reimer, 2002). As an environmental ethic, Leave No Trace offers a code of conduct calibrated to the particular, limited, and arbitrary geographic scale of parks and wilderness areas.

The idea that people should avoid leaving traces—and even adopt a special ethical stance—inside certain legally designated and bureaucratically managed areas may seem strange. The maps of contemporary parks and wilderness areas represent political histories of conflict and compromise, not the unalienable boundaries between nature and culture (Marsh, 2007). In order to garner political support and comply with the language of the Wilderness Act, however, preservationists must engage in a process of purification. They downplay the existence of blemishes (human histories) in the wilderness landscape—such as tire tracks, stone walls, and radio towers—and they emphasize the threats coming from the surrounding environment. Most wilderness activists are aware that the areas they seek to protect are not islands. And yet, the notion of parks and wilderness areas as islands of nature surrounded by a sea of development has served as an evocative metaphor for their cause (Lewis, 2007).

By focusing on the park or wilderness area as the appropriate spatial scale by which to measure and shape ethical behavior, Leave No Trace masks the broader social and ecological consequences of wilderness recreation. Consider the case of outdoor clothing and recreational camping gear. The seven principles of Leave No Trace imply that ethical choices about the environment matter most when they affect ‘natural lands’ inside parks or wilderness areas. Yet, parks and wilderness areas comprise just two of the many spaces through which such products pass during their lifecycles. The LNT code of ethics does not address exploitative labor conditions in less developed nations, domestic landfills, chemical pollution resulting from the

manufacturing process, or other social and ecological consequences of the outdoor recreation industry (Johns & Vural, 2000; Myers & Kent, 2004; Ross, 1997).

Three examples taken from the principles of Leave No Trace convey this oversight. Under principle three, 'dispose of waste properly', LNTCOE suggests that recreationists consolidate and repack their food into plastic bags in order to avoid litter and reduce their burden on the trail. This principle does not encourage recreationists to reduce their production of garbage in general, and it actually promotes waste by encouraging recreationists to replace factory packaging with disposable polyethylene bags. Under principle four, 'leave what you find', LNTCOE directs recreationists not to build structures, construct furniture, or dig trenches in the backcountry. Nylon tents and camp chairs work better, and they have less of an impact. Yet, this advice overlooks the fact that these products are fabricated with mined petroleum, and assembled with the aid of complex chemicals and inexpensive labor only to be shipped across vast oceans on freighters powered by high sulfur coal. Principle five, 'minimize campfire impacts', which recommends the use of lightweight camping stoves for cooking instead of open fires, suffers from similar oversights. In each of these examples, the logic of Leave No Trace depends on limiting the scale of analysis to the park or wilderness area.

Globalization has distanced Americans from the material sources, and social and ecological consequences, of the things they produce and consume (Princen *et al.*, 2002). Leave No Trace has endorsed and participated in this trend by working with members of the Sporting Goods Manufacturing Association and other industry insiders to advocate technological innovation and mass consumption as ways to shift human-induced impacts outside parks and wilderness areas. James Turner pointed to this trend at the conclusion of his paper on the history of wilderness ethics. According to Turner (2002, p. 479), 'to the extent that backpackers actually embraced the notion they "Leave No Trace", they risked divorcing themselves from their actions as consumers outside wilderness... dismissing larger questions of the modern economy, consumerism, and the environment'.

Beyond Leave No Trace

In 1995 William Cronon began his classic wilderness essay with a bold and memorable statement: 'The time has come to rethink wilderness' (p. 69). More than a decade later, however, it has become apparent that thinking alone cannot solve the problems Cronon described. Millions of Americans still view wilderness as timeless, pristine, isolated, pure, natural, and more deserving of ethical consideration than the urban and suburban landscapes where they live and work. Instead of declining, the notion of wilderness as a unique and privileged moral domain is being enthusiastically instilled in a new generation of outdoor recreationists. Respect for wild nature is a cornerstone of American environmental culture, and one that we would not, under any circumstances, wish to jettison. Our challenge now is to connect this respect for wilderness, and the desire to protect and experience it, with a much broader set of social and ecological concerns—to transform a twentieth century wilderness ethic into a twenty-first century environmental ethic.

In this paper, we have documented and critiqued the set of programs, policies, principles, and practices that comprise Leave No Trace. We now offer a vision for

the future that embraces the accomplishments of Leave No Trace, including those of LNTCOE and its partners, while moving beyond its self-imposed limitations. Our proposal seeks to transform the critical scholarship of social science into a more critical practice of backcountry recreation, to expand LNT's spatial scale beyond the boundaries of parks and wilderness areas, and to broaden LNT's ethical purview to include the global economic systems that make contemporary American wilderness recreation possible. It redefines recreationists, from passive ethical subjects and consumers, to active participants in collaborative programs that produce and disseminate new knowledge about the land, shape new government policies and management programs, and inform the design and production of new products that promote the broader goals of social justice and ecological sustainability. What we seek is a more democratic, more participatory, and more radical vision of outdoor recreation as a form of political action.

In order to understand how this might work, we must first examine the conceptual model that informs the current approach to Leave No Trace. Environmental managers often remark that they are 'in the business of managing people, not nature'. The current model of Leave No Trace reflects the pervasiveness of this belief. Earlier in this paper we discussed how government agencies, non-governmental organizations, and private firms manage the behavior of wilderness recreationists through a combination of education, regulation, and innovation. Recreationists are not active participants in setting the agenda for any of these three categories. Instead, public and private institutions collaborate to construct recreationists as passive ethical subjects and consumers whose role is to learn from educational programs, obey regulations, and purchase new products that mediate their contact with wild nature. 'Ideal recreationists' are those people who become so much a part of this system that they no longer require instruction, oversight, or marketing because they have come to identify with the message of Leave No Trace. They have learned how to manage themselves.

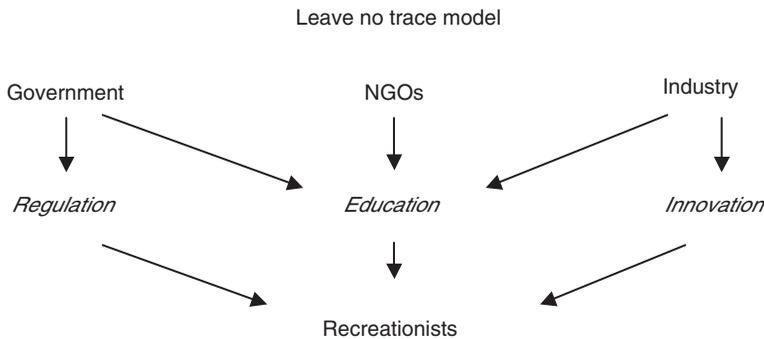


Figure 3. Leave No Trace model. In the Leave No Trace model, individual recreationists become passive ethical subjects and consumers who obey regulations, learn from educational programs, and consume new products. They do not contribute to the formation of government policies and management programs, the production and dissemination of knowledge, or the design and production of new products.

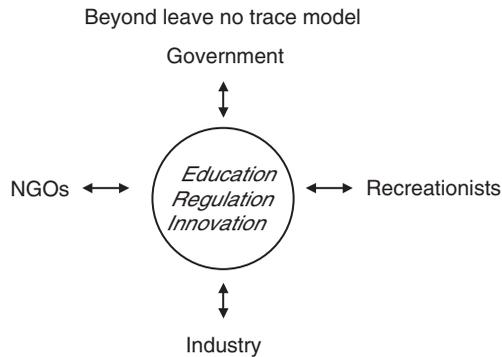


Figure 4. Beyond Leave No Trace model. In the Beyond Leave No Trace (BLNT) model, individual recreationists collaborate with government, non-governmental organizations, and private firms to form new government policies and management programs, produce and disseminate new knowledge, and design and produce new products. The BLNT model rejects the construction of recreationists as passive ethical subjects and consumers. It replaces the hierarchical LNT model with an approach that emphasizes participation, collaboration, and democratic decision-making.

We propose a new model that rejects the hierarchical construction of recreationists as passive ethical subjects and consumers. The Beyond Leave No Trace (BLNT) approach emphasizes participation, collaboration, and democratic decision-making in the production and dissemination of new knowledge, the formation of new government policies and management programs, and the design and production of new outdoor products. Unlike William Cronon's work, which argues for change based on an intellectual critique, the BLNT approach seeks to create change by transforming practices: mundane, everyday activities such as shopping, disposing of garbage, and walking through the woods. Routine activities such as these hold great potential not only for political activism, but also for transforming the problematic foundational ideas that Cronon critiqued. In the BLNT approach, ideas and practices inform each other.

Beyond Leave No Trace takes the old model of recreationists as passive consumers of information, and reframes it so that recreationists become active producers of new knowledge and collaborators in the educational process. This means converting passive, consumptive, uncritical leisure into active, productive, critical recreation. For an example, consider the pioneering efforts of the Appalachian Mountain Club (AMC) in New England. Since 2000 the AMC and US Forest Service have collaborated on 'Mountain Watch' monitoring and restoration projects that employ volunteers to gather data and complete service projects. Current efforts include the 'visibility volunteers' who participate in the Club's air quality studies, as well as the AMC's mountain plant monitoring, adopt-a-peak, and alpine stewardship programs. These programs allow volunteers to take an active role in the production and dissemination of knowledge in a manner similar to that of bird watchers and SCUBA divers, who have long participated in biological surveys. The AMC's efforts provide just one example of how wilderness recreation could become a more critical, productive, and activist enterprise.

Beyond Leave No Trace also draws from new collaborative planning models in order to create a more prominent, active role for recreationists in the formation of government policy and management programs. During the Progressive Era, Congress established new federal agencies to promote rational, scientific management of the country's public lands and natural resources. Yet, over time agencies such as the US Forest Service acquired reputations for establishing policies based on arcane and bureaucratic justifications, or worse, on the demands of a single user group. Examples for wilderness recreation include regulations for trailhead quotas, area closures, special use permits, group size limits, and stock use. Since the 1970s, the federal government has required these agencies to engage in public review processes for many proposed policy changes and management actions. During the 1990s, the Forest Service and other agencies began to experiment with collaborative efforts that included citizen participation further upstream in the planning process. Government supporters of these approaches hoped that they would help the agencies avoid protracted legal conflicts, and generate support for public land management during a time of declining budgets and diminished public confidence (Flood & McAvoy, 1999).

In collaborative planning processes, government employees work together with local residents, activists, and members of public lands user groups to articulate management objectives, define policy options, and create new plans and monitoring programs. These efforts have proven imperfect. But they have also resulted in some successes, such as the creation of multiple species habitat conservation plans under the US Endangered Species Act. Beyond Leave No Trace would incorporate collaborative planning models that emerged during the 1990s, and seek to build more effective decision-making processes for recreation in parks and wilderness areas.

Beyond Leave No Trace also fosters collaborative approaches for the design and production of new outdoor products. Corporations in the outdoor industry guard their designs and production processes from other firms through secrecy, security, and patenting. The time has come, however, for a new approach to product design and production that incorporates more public participation and transparency, and moves corporate responsibility beyond the reductionist approach of overseas factory monitoring. Recreationists must place more political and market pressure on clothing and gear manufacturers to open their design processes, and adopt a life cycle-based, industrial ecology approach to their products. Open source models can be used for enterprising start-up firms interested in developing more socially and ecologically sustainable products. New certification programs, analogous to the Forest Stewardship Council or the Leadership in Energy and Environmental Design (LEED) program, could provide vital information on the suitability of outdoor gear and clothing, and create voices for people who participate in the production of these items. Retail stores should commit to publicizing the results of these programs, and educating their patrons about the impacts of the products they sell. Finally, recreationists should develop communities for the trade and donation of used products, while recapturing traditional crafts of repair such as cobblerly. Beyond Leave No Trace, unlike the intellectual critique of wilderness or current LNT approach, recognizes markets as political spaces (Hartwick, 2000).

One of the great strengths of Leave No Trace is that it distills an entire environmental ethic to seven simple principles. Beyond Leave No Trace offers a

1. Educate yourself and others about the places you visit
2. Purchase only the equipment and clothing you need
3. Take care of the equipment and clothing you have
4. Make conscientious food, equipment, and clothing consumption choices
5. Minimize waste production
6. Reduce energy consumption
7. Get involved by conserving and restoring the places you visit

Figure 5. Beyond Leave No Trace.

more complex vision, but it too can be summarized as a set of seven principles to inform the practices of individual recreationists (Figure 5). These seven new principles add to—they do not replace—the current principles of Leave No Trace. Unlike the current LNT principles, however, Beyond Leave No Trace focuses on choices and activities that transcend the boundaries of wilderness areas, and that connect recreation to the global chains of production and consumption that make the contemporary American wilderness experience possible. The seven Beyond Leave No Trace principles encourage recreationists to educate themselves, make informed consumption choices, purchase less, reuse more, reduce waste wherever possible, and become actively involved in the care, maintenance, and study of wilderness landscapes. These new principles provide an approach through which wilderness recreationists can operationalize the Beyond Leave No Trace ethic.

Some may argue that if Leave No Trace has worked so well to achieve its objectives we should not try to change it. It was never intended to provide a comprehensive environmental ethic, and it is poorly suited to do so in any form. In this paper, we have not attempted to replace Leave No Trace or to give it a role it was never intended to fill. Instead, we have endeavored to build on Leave No Trace, while offering a vision for transcending it. We have sought to draw connections between contemporary wilderness recreation and the global economic system that makes it possible, whose broader impacts are too often rendered invisible to practitioners of Leave No Trace. We have argued that a generation of critical thinking about the idea of wilderness should be converted into a new critical practice of wilderness recreation. And we have offered a proposal for recapturing wilderness recreation—in all its spaces, from the factory floor to the alpine summit, from REI to Palisade Basin—as a form of radical political action. With such ambitious goals, our proposal can only serve as a first step.

Acknowledgements

The authors would like to thank members of the Bill Lane Center for the American West for comments and support. They would also like to extend a special thank you to James Turner, who provided valuable feedback on an early draft of this paper.

Notes

¹ There is a large scholarship in this area. For examples, see the compilation assembled by Callicott and Nelson (1998).

² For an agency perspective, see US Forest Service (2002) *Leave no trace! A program to teach skills for protecting the wilderness environment*.

³ For examples, see the collection of short articles under the heading 'Losing Its Appeal', printed on pages 14–24, in the summer 2008 edition of *Forest Magazine*.

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