Goal Interference and Social Value Differences: Understanding Wilderness Conflicts and Implications for Managing Social Density

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Abstract—Wilderness conflict research has mostly followed the direction of recreation research in the U.S. An interpersonal recreation conflict model proposed in the late 1970s has guided much of the conflict research in wilderness, with emphasis on determining the amount of interpersonal conflict resulting from goal interference and how much one or more hypothesized contributors actually influence the occurrence of conflict. This approach is heavily rooted in expectancy-valence theory explanations of human recreation behavior and may contribute to an understanding of how social densities influence perceptions of conflict. The contributions of activity style, resource specificity, mode of experience and lifestyle tolerance to understanding interpersonal conflict arising from crowding largely comes in the form of understanding the role of expectations and importance attached to social density preferences. Today, however, wilderness conflict extends beyond recreation within the boundaries of wilderness, beyond interpersonal interaction, and beyond the boundaries of wilderness to competing demands for the wilderness resource. Understanding of the causes for differences in attitudes toward wilderness and the meanings various subpopulations attribute to wilderness resources will be critical to developing solutions for conflict management and managing the social mix among all demands in the future.

In contrast with the days of early explorers, when wilderness travel was often a solitary activity, the wilderness resource is now shared by many interests, representing both recreation and nonrecreation uses. Interaction among the various user groups, often with contrasting views on wilderness values, leads to varied amounts of conflict. Much of the research on conflicts in wilderness has centered on conflicting recreational uses. There are other values of wilderness described in the U.S. Wilderness Act besides recreation, how-to use conflicts and implications for managing social density differences:

Conflict research in outdoor recreation in the U.S. has extended from early speculation about causes (Jacob and Schreyer 1980) to many studies of extent and influences on conflict. Lucas (1964) documented the asymmetrical conflict (one-sided) between canoeists and motor boaters in the Boundary Waters Canoe Area of Minnesota before it was part of the National Wilderness Preservation System. Entry to the system did not preclude this conflict since some established motor boat routes were retained when it was designated wilderness. Research on the conflict between motorized and nonmotorized uses was extended beyond the wilderness boundaries to snowmobilers and cross country skiers by Knopp and Tyger (1973). Perhaps Stankey’s (1971) early studies on visitor perceptions of crowding also contributed more to conflict research than usually acknowledged because they illustrated visitors’ differential responses to the types of encounters they had in wilderness. While Stankey was focusing on the reaction to the number of people, visitors saw in the wilderness, these responses were influenced by whether the people encountered were hikers or riding horses. From that time forward, most crowding research has mistakenly ignored this finding, focusing too much on density of people and not enough on the interaction between number of people, their behaviors, and their orientation toward the place, including method of transport.

Bryan (1977) described the potential for conflict between anglers of various specialization levels, demonstrating that conflict was not just between motorized and nonmotorized groups or differing forms of access in the out-of-doors. Some people sought very pristine places to fish and enjoyed the special skills accumulated while moving from very simple angling techniques to more advanced. When more specialized anglers encounter novices, we would expect conflict to occur. This conflict may arise from interference with fish catching objectives or with enjoyment of a pristine place, but it may also rest with basic differences in how members of the two types of anglers value fish and the environment.

between hikers and horse users by bringing some organiza-
tion to the variety of measurement methods being em-
ployed. Conflict had been measured in several different
ways and substantial progress had occurred over the years
in measuring variables that had been hypothesized to
influence conflict.

The primary purpose of this paper is to explore the extent
that knowledge of recreation conflict research can help
us manage recreation use density in wilderness. In this effort,
however, we cannot ignore the growth of conflict research in
recent years to include conflict between such different orien-
tations to wilderness as subsistence users and recreation
visitors, commercial interests and wilderness protection,
and biodiversity protection and human meanings. The focus
taken here is broadly on management of social densities in
order to understand how conflict research can affect the way
we think about proactively managing numbers of people and
types of activities in wilderness.

Review of Past Progress

Past research on conflict in wilderness and outdoor recre-
ation has mostly been reactive and focused on groups with
obvious differences in orientations toward recreation. Some studies, for instance those investigating growing complaints
by canoeists about motorboats, by skiers about snowmobiles,
by skiers about hel-skiers, and by hikers about mountain
bikers, involved groups with differing levels of motorized
or mechanized support for travel. Downhill skiers were
threatened with a nontraditional use of the ski slopes when
snowboarding began to grow in popularity, as horse users
felt invaded by llamas, a nontraditional method of access to
wilderness in the U.S. The conflict between hikers and horse
users was noted on public land in the U.S. well before our
National Wilderness Preservation System was established,
but has grown even as the percentage of users visiting on
horse back has generally decreased (Lucas 1985). There is
also concern about impacts of horses on trails and campsites,
much as some hikers are concerned about the impacts of
mountain bikes on trails. Safety is often a concern when
llamas meet horses and mules on narrow mountain trails,
and speeding bicycles have also caused some injuries and
frightened people and pack stock. Jacob and Schreyer (1980)
proposed that the common element in all of these recreation
conflict situations is goal interference; one person or party is
not able to realize the positive aspects of a visit to the out-of-
doors because of the behavior of someone else.

This commonality is somewhat constrained by our aware-
ness of conflict between groups who may or may not directly
interact in the wilderness. A study of hunters and nonhunters
(Vaske and others 1995) has suggested that conflict can be
based on differences in values, represented by differences in
meanings attached to a resource or differences in attitudes
towards management policy to protect these meanings, held
by opposing groups, encouraging us to extend our conceptual
conflict model to include a more broad range of conflicts.
Implications for social density exists within the study of
conflict between tourism promotion and wilderness protec-
tion, or between placing high value on biodiversity restora-
tion and personal attachment to a place. Social value differ-
ences offer us additional understanding of conflicts and the
ways we might address them through wilderness policy.

Goal Interference Conflict

Jacob and Schreyer (1980) suggested that conflict is caused
by goal interference attributed to the behavior of another
person. Arising from the popularity at the time of adapting
expectancy-valence theory concepts to outdoor recreation
issues, recreation was described as a goal oriented behavior
and self-interest with achieving that goal would cause nega-
tive emotional response. The more value visitors place on
finding naturalness while on a trip to wilderness, and the
higher their expectations are that they will indeed find it at
the chosen time and place of a trip, the more likely conflict
will be felt if this goal is not realized. It is interpersonal
conflict if the visitor can attribute this loss of goal attain-
ment to the behavior of someone else (for example, the
person who has damaged the vegetation with livestock, or
violates the natural quiet of wilderness with a radio, or
crosses the bow of a canoe with a motorized boat), not to the
weather, car trouble, or illness. In the traditional school of
cognitive psychology followed by many recreation research-
ers at the time, the assumption that all recreation participa-
tion is goal oriented was very natural.

Incompatibility of goals is not a requirement for conflict.
While conflict may arise when wilderness travelers seeking
solitude encounter those seeking challenge and risk but
place no value on solitude, or when those whose relation to
wilderness is for subsistence encountered those there for
recreation, sometimes conflict exists among those with
common goals. A local, subsistence user of the wilderness with
a long history of association with a place may be less easily
for the enjoyment of being alone in the wilderness, or
enjoying being the first one to travel over newly fallen snow.
Encountering a tourist with the same goal might result in
conflict.

Goals can be similar or different between conflict groups,
and the conflict may include groups differing in levels of
impact, traditional or invading practices, and mechanical or
nonmechanical methods of travel. All of these types of
recreation conflict have been hypothesized to be at least
partially fueled by perceived differences in four ways to
describe recreation visitor groups: activity style, resource
specificity, mode of experience, and tolerance of lifestyle
diversity.

Activity Style—The concepts of activity specialization
and the level of importance placed upon participation in
the activity have come to represent the intensity with which
visitors participate in selected activities. A backcountry
skier may be extremely specialized in cross-country skiing
and place substantial importance on the activity as a dem-
stration of a primitive skill or for maintaining cultural
identity. A tourist participating in the same activity as
another person and in the same place could unknowingly
contribute to conflict due to differences in their activity
styles. Similarly, in a remote U.S. wilderness, an angler who
places high importance on tying flies and luring wild cut-
throat trout to a barbless hook will likely experience conflict
with spinning or bait anglers sharing the same resource.

Numbers of people present could also interfere with the
specialized angler’s goal, no matter what level of intensity
their activity style, with conflict most likely for those who
place the greatest importance on this type of angling and
have the greatest expectations for accomplishment. Low

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numbers of people will not necessarily create less impact on
the less specialized angler, depending upon the expectations
and valence attached to social density. Watson and Cronn
(1994) have found that less experienced wilderness visitors
have less ability to determine trends in resource and social
conditions and therefore are less likely to evaluate condi-
tions as unacceptable or declining in quality.

Resource Specificity—Some people are more depend-
ent upon a particular place or resource than others or are
attached in different ways. Mountain bikers at the Rattle-
snake National Recreation Area in Montana reported less
substitutes for the kind of biking they liked to do there than
hikers reported (Watson and others 1991). They were more
dependent upon the place than hikers. Hunters were be-
lieved to visit the Upland Island Wilderness in Texas mostly
for the functional values it offered; they believed it was a
reservoir of large deer, and therefore they exhibited rela-
tively low place and wilderness attachment scores (Williams
and others 1992). An identifiable portion of visitors to the
Caney Creek Wilderness in Arkansas came for the symbolic
values it represented; “wilderness” demonstrates the social
values Americans place on protecting a network of wild
areas across the country for this and future generations.
Some residents of North Georgia frequently visited the
Cohutta Wilderness not at all because it was part of a
national wilderness system or for some set of functional
reasons, but because it was a place that had always been
available to them as a natural place, and they had attached
emotional values to it many years ago. The more visits
people had taken to the Cohutta Wilderness, the greater the
attachment to the place.

People with a strong level of dependence, strength of
attachment, or relationship with a place may feel conflict
when encountering people who they perceive have weaker
or different relationships with that place. Visiting a place
with low numbers of people could be a functional purpose
for those urban dwellers needing to escape the crowds of the
freeway or community. Rural residents may see the lack of
people in wilderness as symbolic of the values associated
with rural lifestyle. Traditional users may find the pres-
ence of other humans threatening to hunt or fishing suc-
cess. In any case, encountering social densities that extend
beyond expectations for those who value the lack of people
may change the experience from that of wilderness. Num-
bbers of people can influence achievement of wilderness
character for different reasons, potentially as a result of
different relations with the place.

Mode of Experience—Originally, Jacob and Schreyer
(1980) hypothesized that those more focused on the environ-
ment have more rigid definitions of acceptable aspects of
their experience there and are less tolerant of the behaviors
of others that change these aspects. More recently, this
potential contributor to conflict has been expanded to the
belief that not only strength of focus on the environment is
important, but that other points of focus exist and that
different points of focus between groups can contribute to
conflict. Mountain bikers at the Rattlesnake National Re-
creation Area were found to be most focused on the activity
itself, while the hikers who were feeling conflict were more
focused upon their social group or the environment (Watson
and others 1991). The hikers probably accurately perceived

Tolerance of Lifestyle Diversity—Some earlier work
suggested that people of different socio-economic groups
could be in conflict partly because of differences in lifestyle
preferences (Knopp and Tyger 1973). Later work by Watson
and others (1993) acknowledged that these differences in
lifestyle preferences could only contribute to conflict if they
were perceived by the group feeling conflict. Hikers per-
ceived many more differences in lifestyle factors between
them and bikers than really existed (for example, some
hikers stereotyped all bikers as university students) or than
the bikers perceived, potentially a contributing factor to the
asymmetry of this conflict situation. Saarinen (1998) sug-
ests that backcountry and wilderness hikers in Finland
distinguish between Finnish and non-Finnish tourists when
deciding on how to greet them while hiking. Stereotypes of
people who participate in a particular activity or who come
from a particular place can contribute to conflict by either
directly interfering with experience goals or by conflicting
with goals not specifically related to the outdoor recreation
experience.

A private rafter might encounter a commercially outfitted
group during a trip down the Salmon River in Idaho, and
that raft of people should not interfere with goals for the
private floater any more than encountering another private
party. However, conflict can occur if the private rafter knows
or believes that commercial users are the dominant user on
that river, nearly half of the commercial users have annual
household incomes over $100,000 (compared to only 12
percent of non-commercial floaters), they are novice river
floaters, they have high expectations for nature but attach
low value to solitude, they tend to come from distant large
urban centers, and they do not have to compete in a lottery
system like the private floaters to obtain a permit to float the
Salmon River (Hunger and others 1999). Categorization of
individuals as members of an “outgroup” is closely related to
evaluations of goal interference by many people (Ramthun
1995). Stereotyping seems to lead individuals to make as-
sumptions about the probable behavior of outgroup mem-
bers, or to simply equate their presence with interference in
goal attainment. Commercial floaters could represent any of
several aspects of civilization that the private floater worked
so hard to escape by taking a wilderness float trip.

Social Value Conflict

While not as well represented in the recreation or wilder-
ness literature, a more broad approach to understanding
conflict necessarily entails understanding social value dif-
ferences. Watson and Landres (1999) have proposed that
attitudes toward wilderness are diverse and constantly
changing as a result of changes in society and specifictions
we are doing to protect the wilderness resource. In turn, the
ecological and human values (meanings) we derive from this
protection and contribute to higher order personal and
social benefits are often in conflict. Sometimes this conflict
is between the two types of values and sometimes within one
type of value.
It is true that predator control to protect reindeer herding in Finland (Sippola 2000) or livestock grazing allocation in the U.S. may conflict with purposes of biodiversity maintenance, pitting ecological values against human meanings (Watson 2000), but differences can also exist among incompatible human values attached to the wilderness resource. Hunters can attach meanings to the trophy values associated with remote wilderness wildlife populations, or they can value the meat and by-products for their subsistence or ancestral meanings. Nonhunters can value the scenic qualities of seeing large, wild animals. These different values placed upon the wildlife resource are believed to be the primary contributors to the increasingly visible social debate over hunting and trapping in the U.S. (Vaske and others 1995).

Conflicts which do not necessarily involve onsite interaction and which can be ascribed to these value differences may be partly caused by some of the same contributing factors as in the goal interference model (particularly resource specificity and lifestyle tolerance). However, greater emphasis is placed on societal changes and specific sources of influence in understanding this type of conflict. The conflict between hunters and nonhunters (Vaske and others 1995) mostly stems from differences in social values, not interpersonal interaction. One group possesses a set of values (attitudes) that accepts killing of wildlife by humans for sport or consumption, and the other does not. They also differ in the meanings attached to wildlife, with one group placing high value on seeing wildlife and acknowledging their right to exist, while the other group attaches additional meaning to consumptive uses. This approach allows us to look at more broad conflict issues like the conflict between subsistence use and tourism promotion, not just subsistence activities and the tourist. A complex set of values exists across an array of demands on wilderness, and a goal interference approach is insufficient to understanding them or working toward solutions.

Measurement of Conflict

There has been little agreement in the past on the topic of conflict measurement. Jacob and Schreyer (1980) offered a conceptual definition of interpersonal conflict as goal interference attributed to the behavior of another, but they did not suggest a specific way to measure that concept. In some cases, it has been recommended that more than one measure is appropriate in order to understand the effects of efforts to manage the conflict (Watson and others 1993). Watson and others (1993) differentiated between three common interpersonal conflict measures:

1. Disposition toward conflict. Using a scale to measure position from “extremely undesirable” to “extremely desirable,” the strength of a person’s feelings toward the possibility of encountering a person or group of another type can be measured. It is considered cumulative in that it does not focus usually on a specific encounter, but it does also not focus very specifically on actual feelings of conflict.

2. Attraction toward outgroups. Using a nominal scale with points of “enjoyed meeting them,” “didn’t meet any,” and “disliked meeting them,” the strength of attraction can be measured for encounters with certain types of groups during a specific trip. The lack of attraction is assumed to represent conflict.

3. Goal interference measure. A measure of conflict more adherent to the Jacob and Schreyer model requires the subject to indicate “yes” or “no” in response to being asked if the behavior of someone else interfered with their enjoyment of their wilderness trip (or trips) to the area of interest. If yes, they are asked to explain what behavior caused the interference and who exhibited that behavior.

In research by Watson and others (1993) it was found that the potential contributors offered by Jacob and Schreyer (1980) and refined by others over the years were more closely associated with predisposition toward conflict and strength of attraction toward outgroups than goal interference. Activity style, resource specificity, mode of experience, and lifestyle tolerance differences may be most closely associated with conflict through influence of expectations and importance attached to wilderness attributes, leading to predispositions toward goal interference, not conflict itself. This association has not been widely acknowledged in the conflict research literature, but may be an extremely important factor in developing approaches to managing conflict.

In an explanation of social value differences, Vaske and others (1995) advocated use of the goal interference measure to more accurately identify the groups in conflict and sources of the conflict. This measure, however, focuses too directly on behaviors in a reactive way. The need is to understand the values that are driving the conflict and contributors to changing these values. A more qualitative method of data collection may be more productive in developing this understanding. Generally, there is a need to advance methodologies that define and measure conflict at the subpopulation level. Minimally, group level measures need to be employed that acknowledges conflict often is influenced by group dynamics and cumulative attitudes and experiences of groups of people. Beyond measures of interpersonal conflict, the amount of conflict and differences in values may be better understood by approaching the conflict from a subpopolation level than an individual level. Evidence of conflict can exist in organized group position statements, articles written to be published in newspapers by identifiable interest groups, justifications for court cases, or simply a careful analysis of the meanings and attitudes placed on the wilderness resource by different interests. There seem to be those subpopulations who believe social density should not be controlled by the managing agencies. There are also organized groups who believe social density management is prescribed in the legal foundations of the wilderness system in the U.S. Conflict between these two groups should be studied at the subpopulation level, not the individual level. A simple vote to determine the outcome of this debate would not be constructive.

Implications

There remains a need to approach feelings of conflict related to undesirable social density in a reactive manner, trying to measure how much conflict occurs and whether it is caused by some perceptions or behaviors that can be modified to reduce the conflict. These measures could serve as good indicators (Stankey and others 1985) of impact to
solitude experiences that is attributable to the behavior or presence of others.

Some conflict, however, exists because of incompatibility of user behaviors, uses or values associated with wilderness and are most likely to be addressed by temporal or spatial separation of opposing social groups. An appropriate approach to conflict management may be a proactive one that brings all interests together in order to understand conflicting values and work through compromise or recognition of decision criteria. The way we identify groups for involvement in public participation and how we define public participation may change substantially in the near future. Our dependence upon management solutions that ignore the complexity of social value differences and reactively attempt to solve conflicting demand issues through exclusion may also change (Watson and others 1997).

Conflict research suggests to us that social density should not be studied as an independent causal factor. The number of people one sees along a trail in wilderness or on a float trip on a river may have more to do with expectations and importance attached to certain types of encounters than the absolute numbers of people. Sometimes managers have established social density indicators for wilderness based only on numbers of people seen each day without distinguishing between user types (for example, horse back riders and hikers, kayakers and rafters). This practice ignores the most basic piece of information provided from early carrying capacity studies. While consistent relationships have not been found between encounters and experience quality, people have provided different responses to encountering different types of groups, in different places, behaving differently, and under different management regulations.

There is no easy way to incorporate the knowledge derived from previous conflict research into social density determinations without management decisions about objectives for social density. In the initial plan for the Salmon River inside the Frank Church-River of No Return Wilderness, a desire was stated to manage the river for a particular type of group, the intermediate-skilled river floater. This targeted “market” resulted from an analysis of opportunities in the intermediate region of this river, recognizing an abundance of solitude experiences that is attributable to the behavior or presence of others.

user (like jet boaters on the Salmon River inside the Frank Church-River of No Return Wilderness), a group of scientists, scouts, a wilderness therapy group, or a commercially outfitted group in the wilderness, we need to proactively study the values, meanings, expectations, and importance they attach to the place.

2. How does interacting with various numbers and types of people interact with these values, meanings, and expectations? Participatory Rural Appraisals (Medina and Rodriguez 1998) and Community-based Conservation practices (Jones and Braun 1996) are explaining and management implementation methods that attempt to proactively understand the attitudes, values, and behaviors that need to be addressed in wilderness management and assure they are addressed. An approach to social density management that similarly is based on the mix of human and ecological values associated with wilderness (or a regional system of wilderness opportunities) instead of the single dimensional crowding measures commonly used today will extend our abilities to meet the full potential of wilderness to current and future generations of people.

References


