NONTRADITIONAL USES OF THE NATIONAL PARKS


Submitted to the

National Park Service

by

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ABSTRACT

Nontraditional Use of the National Parks

by

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Utah State University, 1979

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Increasing numbers of individuals with diverse expectations and
values are being attracted to the National Parks.  These expectations
have manifested themselves in a variety of activities including some
of the new action/excitement sports.  Many of these activities may
be in direct conflict with the traditional, though changeable, con-
cept of the National Parks.

The present study was designed 1)  to assess the kinds of activities
that visitors and managers feel are inappropriate in the National
Parks; 2)  to examine visitor and manager perceptions of the National
Parks; and 3)  to explore the relationships between these perceptions
and their definitions of appropriate recreational use of the parks.

Two hundred and eleven visitor interviews were conducted along
with 12 in-depth interviews with park managers.  The interview format
consisted of a two-part questionnaire that was administered on-site
at nine park units (National Parks and Monuments) in Utah.  Three
managers were also interviewed in Yosemite.  Both populations were
first asked to evaluate each of the 22 activities as to their

appropriateness in the National Parks (NRA, historic sites, etc. were specifically excluded) and to explain their reasons for each rating. The activities ranged from the traditional (hiking and picnicking) to the unusual (hang gliding and nude bathing). In addition, participation rates for each activity were recorded to study their influence on perceived acceptability. The second part was designed to establish a visitor profile based on demographic information and their subjective appraisal of the purpose of National Parks and their attractiveness. Park managers were asked similar material with additional questions relating to service history in the agency.

Results indicate that the following activities were rated as most problematic in terms of their appropriateness: trail biking, nude bathing, water skiing, snowmobiling, motor boating, four-wheeling, and hang gliding. However, none were rejected by a majority of visitors. The criteria most often mentioned as justification for these activity ratings were environmental damage; conflicts with other users; fumes, dust, noise; pollution; personal morality; and safety.

In addition, there seemed to be little connection between a visitor's perceptions of the National Parks (which tended to be general) and his/her evaluations of activity appropriateness. Visitors who participated in the activity being rated, however, were more likely to rate an activity as appropriate in the National Parks. Conversely, those unfamiliar with an activity tended to make decisions based on assumed images of activities.

While managers used criteria similar to those selected by visitors for judging activity appropriateness, their evaluations tended to be more precise.

(146 pages)

CHAPTER 1

NONTRADITIONAL USE OF THE NATIONAL PARKS:

PROBLEM STATEMENT

"The park areas in the natural and historical categories were set aside primarily to protect their natural and historical resources and not as locations for general recreational activities" (Everhardt 1975).

## Introduction

Until fairly recently, the National Park Service has had little difficulty balancing its twin missions of preserving the National Parks while providing for the enjoyment of the visiting public. In fact, prior to the end of World War II, the conflict now evident in that mandate rarely materialized. During those early years, park use was so low that it had little impact on preservation. Low use, however, also threatened the livelihood of this new resource agency. Therefore, every attempt was made to attract visitors. Advertisements were circulated that promised awesome natural features within easy walking distance from comfortable accommodations. Railroad spurs were built along with fine restaurants; and some parks even offered their own brand of entertainment (e.g., Yellowstone's bear feeding).

Today, the Park Service is burdened by its own success, partly due to its own efforts and partly due to such external factors as improved transportation, longer vacations, and greater disposable income. The

result has been a massive increase in visitation--a trend that has had some unwanted, though predictable, side effects. Of these, the most immediate involves the environmental impacts of tens of thousands of visitors on the popular park features. In addition, by the mid-1960s, some Park Service employees began to worry over what was happening to the park experience itself.

Unfortunately, this relatively new concern came at a time when both the number and kind of recreational activities considered popular by the general public were increasing astronomically. Given the increase in visitation, it is not surprising that many of these activities began appearing in the National Parks. Even such time honored activities as family camping had undergone some radical changes, beginning with the trailer and ending with the self-contained mobile home equipped with every possible convenience. Not all the changes were towards greater comfort. A few campers took up backpacking. Yet, regardless of how one camped, certain problems came into existence where none had existed a decade before when camping had fewer variations. Today, park managers have to be concerned with huge recreational vehicles that clog scenic pullouts designed for automobiles, and campgrounds set up for tents. In the backcountry, park personnel are being forced to consider both physical and psychological carrying capacities.

To compound the problem, a whole new array of highly technical activities found their way into the Parks. A few were noisy and potentially damaging (trail bikes); others were quiet but extremely visible (hot air balloons). Some which had already existed became

recreational activities (four-wheel drive jeeps and trucks); others grew out of space age discoveries (hang gliders). Park traditionalists often pondered what was next. "The age of the individual mini-helicopters, which could place a visitor anywhere in a park within minutes, is almost here" (The Conservation Foundation 1972:39). With the advent of motorized hang glider that prediction becomes a definite possibility.

Furthermore, recent sociological and psychological evidence indicates that the trend in such use is not a passing fad. In fact, many social observers believe that because their popularity appears to be related to larger societal trends, they will increase in numbers and importance. Adding to the immediacy of the issue, participants in a number of these activities have created politically adept national organizations to lobby for their interests at all levels of government. Using personal communications from their members, they have successfully overturned numerous unfavorable government decisions and in many cases have secured the right to use more public lands.

A central question remains, however. Why the National Parks? In many cases the answer to that question can be related to the physical resource itself--a resource that may provide ideal and sometimes unique conditions for several of the activities mentioned above. Few areas in the world, for instance, can equal the "big walls" of Yosemite for technical rock climbing. It could also be that some of these new sportsmen are attracted to the parks for the very same reasons that lure more conventional visitors. In other words, though their means may differ, their primary motivation for visiting a park may be to experience the beauty of that park.

## Current Park Service Policy on Nontraditional
## Uses of the National Parks

Based on a draft policy statement issued to regulate hang gliding in the National Parks, the Park Service adopted a position (early in 1975) to cover any such use which it considered "nontraditional." Today, that position is outlined in the Park Service's Management Policies notebook (Chapt. VII, page 7; 1978 edition). Accordingly, nontraditional uses are "certain outdoor recreational activities which are not necessarily dependent upon park resources for their realization, and which do not constitute traditional or customary uses." The policy then lays out the conditions that must be met if these activities are to be allowed. They must not "interfere with normal park usage; constitute a consumptive form of use; have an undesirable impact on park resources; compromise the historic or natural scene; or present a danger to the public welfare and safety, including safety of the participants." In addition, under current guidelines, each park superintendent is to be the final judge as to whether each condition has been met.

Not surprisingly, this policy has been a source of controversy for the Park Service. First, because each superintendent is his own judge, there is a certain amount of inconsistency between parks. In some cases, this can be attributed to legitimate management decisions. For example, trail biking may be too damaging for certain parks with fragile environments; or hang gliding too dangerous for the on-site weather conditions. In other cases, however, there may be reason to believe that some managers have been prejudicial or overly

restrictive in their decisions.  Second, the very term "nontraditional"

is problematic.  In other words, it is totally possible that some

customary uses could not pass the criteria specified for nontradi-

tional uses.  Car camping, for example, is not necessarily dependent

upon park resources for its realization, and it may be more damaging

than many of the uses considered nontraditional.  Lastly, the

current policy appears to imply that nontraditional participants

lack an appreciation for the park resources.  In rebuttal, many such

participants assert that they are more in tune with the park environ-

ment than those who spend half their time in the parks watching tele-

vision inside their mobile homes.

## Study Objectives

The nontraditional use issue poses a unique problem for today's

park manager yet research in this area has been sporadic and, for

the most part, confined to specific activities, e.g., snowmobiling,

ORVs, and whitewater river running.  The present study will be more

comprehensive in its scope.  It will aim at acquainting park managers

with a general overview of the issue independent of the activity in

question.  Using a broad theoretical approach, the study will focus

on 1)  determining which activities are considered inappropriate by

managers and visitors in the National Parks; 2)  examining visitor

and manager perceptions of the National Park concept; and 3)  exploring

the relationships between these perceptions and the factors that

influence an individual's definition of appropriate recreational use

of the National Parks.

# CHAPTER II

## LITERATURE REVIEW

### Introduction

The nontraditional use issue can be traced to two related areas: the perception of natural environments and current recreational use trends. The first part of this review will briefly examine the influence of culture on Western man's perception of nature, the attachment that man develops for particular "places," and the National Parks as specific recreational places. The second section will concentrate on outdoor recreation as a social and technological phenomenon.

### Perceptions of Natural Environments

Lynch (1973:307) noted that "the creation of the environmental image is a two way process between observer and observed. What he sees is based on exterior form, but how he interprets and organizes this, and how he directs his attention, in turn affects what he sees." One might ask then, What factors influence this perceptual process? Certainly, internal physiological factors are involved; yet, increasingly researchers have turned towards various external factors which can shape and modify perceptions. While a complete compendium of such factors is beyond the scope of this review, one area of particular relevance will be considered: the effect of culture on environmental perception.

## Nature and western culture

In order to clarify the attitudes of Americans toward their National Parks, it is helpful to examine Western man's cultural perspective on nature. Burch's (1964) treatment of Western culture and nature focuses on certain shared "collective myths" which are shaped by historical and philosophical antecedents. "It should be clear that vocabularies of nature are not contemporary constructs but are reflections of underlying historical trends with present expectations and actions being shaped by these historical directions" (Burch 1964:34). Other social theories support this argument. Berger and Luckmann (1966:95), for instance, assert that that which cannot be experienced directly in everyday life is ultimately legitimized by "symbolic universes" or "bodies of theoretical tradition that integrate different provinces of meaning and encompass the institutional order in a symbolic totality."

While the specific historical directions or theoretical traditions are as diverse as the various cultures from which they arise, several authors have commented on the key themes that Western collective myths have in common. Of these, one deserves special attention because of its pervasive effect on the perception of natural environments: the idea that man is separate from and has dominion over nature. In his definitive treatise, Glacken (1967:vii) attributes this key notion to the belief that "the planet is designed for man alone as the highest being in creation, or for the hierarchy of life with man at the apex."

With such a cultural world view, it is not surprising according to Redfield (1953:109-110) that the Western world "tends to regard the relation of man to nature as a relation of man to physical matter in which application of physical science to man's material comfort is man's paramount assignment on earth." In addition, to emphasize that such exploitation is purely a cultural invention, Redfield points to ancient and preliterate societies where man perceives himself to be part of nature and, therefore, unable to exploit it.

There have been, however, some crucial countercurrents to the traditional man/nature paradigm of Western cultures--countercurrents emanating from two important sources: Darwin's theory of evolution and the writings of the 19th century Transcendalists. Aldo Leopold, for instance, cited the theory of evolution as the basis for his "ecological conscience" and "land ethic" because it "vividly drama- tized man's membership in rather than lordship over the community of living things (Nash 1973:193-194). Likewise, Spoehr (1956:100-101) emphasized the importance of Darwin's theory because it "dealt with man as a part of a huge, dynamic biocoenose, of which man was only a small part, actually not very different from other parts, and subject to the same processes and regularities."

Other authors give equal credit to the Romantics and Transcen- dentalists of the 19th century and to those influenced by them-- John Muir, in particular. Their collective appeals for a new cultural perspective made an enormous contribution to the spiritual, sentimental, and symbolic power of nature. Burch (1964), for example, applauded

the Transcendalists for their ability to use nature as a symbol for
resolving the fundamental conflict between the individual and society.
"All actions of nature, their synthesizing symbol, are translated into
personifications and are related to the lessons they offer human
morality--a guarantee of individual freedom and communal responsibility.
Unity is to be formed out of healthy and natural diversity" (Burch
1964:79).

Despite science's functional and literature's symbolic contribu-
tion, it took a "quiet crisis" (Udall 1963) to give a sense of urgency
and weight to the new holistic conception of nature. The "environ-
mental catalysts" for this crisis began in the 1960s and span the spectrum
from atomic fallout to the deleterious effects of pesticides. The
result, according to Nash (1973) was a growing concern for not just the
quality of life but for life itself. By the 1970s modern Western man
found himself burdened by two opposing world views: the traditional,
enculturated view of man as master of the natural environment and the
modern, unavoidable view of man as a mere part of that environment.

## The concept of place

Apart from viewing man as a cultural entity and, therefore, subject
to its collective myths; it is also useful for this discussion to
examine another man/environment relationship--one that appears to
cut across cultural boundaries. Tuan (1974) refers to this relation-
ship as "topophilia" or the affective bond between an individual and
a particular place or setting. In later writings, Tuan (1976:12)
extended this concept to include "the broad range of emotional bonds

between man and his terrestrial home." Borrowing from John K. Wright, he termed these bonds "geopiety." Geopiety has often found its most powerful expression in patriotism or love of the homeland. The homeland comes to represent both "the memory of heroic battles won and lost" and "the memory of sounds and smells, of communal activities, and homely pleasures accumulated over time" (Tuan 1977:159). Such deeply seated emotions, according to Tuan, are common to all men, nomads and sedentary people alike.

The concept of geopiety is important because it begins to shed light on the human perception of "place," a pivotal concept in environmental perception. Tuan (1975:152) defines "place" as "a center of meaning constructed by experience." The nature of that experience can be either direct (through the senses) or indirect (through symbolism). The sensory experience implies physical contact which can be long term as is the case of home or neighborhood or short term such as on a visit.

The literature is replete with examples of long term contact, particularly in regards to cities (Briggs 1968, Lynch 1960, and Buttimer 1969). Although in most cases, long term contact produces the strongest sense of place, short term contact of sufficient intensity can elicit the same feeling. "A brief but intense experience is capable of nullifying the past so that we are ready to abandon home for the promised land" (Tuan 1977:184).

The symbolic experience represents the other mode of knowing; and while it is used in all experiences to some degree, it is particularly important for large or remote places where direct, physical

contact can be only temporary or piecemeal. The National Parks or the entire United States are good examples. A place in this context becomes a mental construct or, as Langer (1953:95) puts it, "a created thing, an ethnic domain, made visible, tangible, sensible." Tuan (1975) refers to symbolic thought as extrapolation beyond sensory evidence, yet he believes that such experience can produce the same emotional effect. Again, patriotism is a good example. Graber (1976: 31) in analyzing abstract thought, touched upon "the dynamic inter-action between subject and object." Part of this interaction involves "the process of intellectual clarification and emotional intensifi-cation" which can result in powerful verbal and visual images in the cases of writer and artist, respectively. Such outward expressions affect not only the subjects themselves but their readers/viewers as well. The importance of these images is expressed by Naipaul (1964:205), "No city or landscape is truly rich unless it has been given quality of myth by writer, painter, or by its association with great events."

One of the best examples of how symbolism can be used to generate emotional support for a particular place was demonstrated during the Echo Park controversy (Nash 1973). In order to halt plans for a dam that would destroy a remote part of Dinosaur National Monument, a coalition of environmentalists launched a campaign to raise the aware-ness of the significance of our parks. By appealing to a wide range of emotions through the use of both visual and written images, they amassed the necessary public support to eventually kill the bill in

Congress. The surprising fact about the Echo Park success is that the majority of public support came from people who had never and probably would never physically see that resource.

In addition to their symbolic significance, "places" may also subsume certain functional characteristics. Lee (1972), in particular, adopts this perspective and his schema will constitute a major premise of this study. According to Lee, a social group or groups will negotiate the meaning of a particular place in order to reduce the number and intensity of socially problematic elements. Such shared meanings are functional for orderly group life because they eliminate any uncertainty as to appropriate behavior. Based on this assumption, Lee (1972:82) asserts that "individuals will seek outdoor areas where they may share a scheme of order with others similar enough to themselves to be able to take for granted many everyday normative constraints." Lee further categorizes four kinds of recreational places according to the social milieu in which they are situated: neighborhood, district, regional, and remote. Of these, remote places pose a peculiar problem because, unlike the other areas, "those who live in rural and wildland areas are usually proportionately too few to play an important role in defining remote public outdoor places near their residences or communities" (Lee 1972:72). In these situations, definitions are established according to the activities and attractions present at that location.

Research has been carried out to see if people do have conceptually useful definitions of recreation places in their minds, and how these

influence attitudes and behavior. Hendee et al. (1968) developed an attitude scale to differentiate wilderness purists from convenience oriented users. This scale was then used to determine if one's attitudes affected behavior. An interesting finding of this study showed that wilderness purists had strong opinions on the appropriateness of behavior in wilderness environments.

## National Parks as recreational places

Tuan's (1977) modes of experience and Lee's (1972) discussion of appropriate behavior are useful conceptual tools for analyzing the problematic and often vague definition of "place" that is associated with the National Parks. The overriding problem, what Schreyer (1976) terms "lack of specificity of concept," can be traced to three characteristics of the National Park system: the remoteness of most parks, the diversity of units, and the history of the system.

The remoteness of most National Parks results in several problems for a single, shared definition. First, it implies that the majority of individuals who see and use the Parks are visitors--a fact that curtails long-term sensory experience. Of course, as Tuan noted, an experience of sufficient intensity can compensate for lack of day to day contact. Yet, he also asserts that the typical visit falls considerably short of this level. "The American tourist is frequently so concerned with proving that he has been to a National Park via his camera that he only superficially experiences the beauty before him" (1974:95). Furthermore, recent statistics indicate that sightseeing is the primary motivation for visiting a National Park (Noe 1976).

On the other hand, the use of backcountry areas has increased sig-
nificantly indicating that greater numbers of visitors desire to maxi-
mize their sensory experience.

As stated above, remoteness also means that visitors will base
their definitions of appropriate behavior on the activities and
attractions present at that location.  The National Park system, however,
contains a wide spectrum of both attractions (e.g., desert canyons,
temperate rainforests, alpine tundra, and subtropical swamps) and
activities (e.g., family camping, whitewater rafting, fishing, and
snowmobiling).  It would not be surprising, therefore, if visitors
adopted quite different definitions of appropriate behavior depending
on which parks they had visited or knew about.  Schreyer's (1976)
research on whitewater river recreation, in fact, indicates that
visitors are likely to accept the present use of an area if the situ-
ation is unfamiliar.  In other words, with little or no prior exper-
ience, visitors are likely to support the status quo.  Lee (1972:81)
however, notes that there is no guarantee that the present use will
be accepted because "individuals and groups have greater control over
idiosyncratic definitions in remote settings than in any other out-
door places."

Lastly, it is reasonable to assume that most visitors will use
some symbolic information to develop a definition of place.  Unfor-
tunately, such information is often confusing when it comes to a con-
sistent definition of place or appropriate behavior.  Media coverage
(one of the primary sources of symbolic information) ranges from a

nationally televised program on rock climbing in Zion National Park
to Edward Abbey's _Desert Solitaire_ and from newspaper articles on jeep
safaris in Canyonlands to a _Natural History_ expose on the endangered
Grizzly Bear in McKinley, Yellowstone, and Glacier National Parks.

Much of the present day confusion, however, can be traced to the
administrative history of the National Park Service and to the various
attitudes held by the public regarding the National Park experience.
Yellowstone, for instance, was established as a "pleasuring ground for
the benefit and enjoyment of the people." In combination with 19th
century attitudes towards tourism and nature, this initial policy
shaped future management decisions (Nash 1977). One such series of
decisions involved tourism development. The public expected easy access
to the park's natural wonders and comfortable accommodations, so the
Park Service authorized the construction of plush hotels, fine rest-
aurants, and railroad spurs. As Nash points out, no one questioned
the appropriateness of that decision. "Everyone concerned simply
assumed that mass, mechanized recreation in a civilized context would
be the park experience" (Nash 1977:74).

This attitude dominated public thinking for several decades and
was reinforced by Park Service statements and administrative decisions.
A few of these are worth noting. First, the National Park Service
Act of 1916 itself declared that the parks were for the enjoyment of
the people as long as the scenic wonders were left unimpaired. The
1916 Act, however, did not spell out the types of enjoyment or activities
that it considered appropriate. These decisions were left up to each
visitor. Second, to boost visitation, the Park Service made every

attempt to augment the visitor's experience by allowing certain promotional gimics, such as the firefall in Yosemite. A third note-worthy decision involved Mission 66, a 10-year program designed to provide easier access, more visitor centers, and better lodging for tourists.

While there were a few dissenting voices prior to the 1950s, not until then did anyone seriously criticize the Park Service for not recognizing other potential uses of the parks, particularly those involving wilderness. As mentioned above, the Park Service responded with Mission 66. Finally, the Wilderness Act of 1964 forced the issue, and wilderness characteristics received official recognition. Despite this clear public statement about its attitude toward the National Parks, the Park Service believed it was already sufficiently preservation oriented and resented having this new concept superimposed on its original, enabling legislation. Merriam (1972) later supported that belief. In fact, he felt that the Park Service had always seen its primary mission as preservation and had gotten into the "federal recreation business" as the result of external pressures, not by its own design.

By the 1970s there appeared to be a clear definition of the National Park concept--a definition shared by the public and the Park Service alike. Parks were for preservation and for passive appreciation of natural environments.[1] Yet, certain undercurrents began to appear that seemed to undermine that definition. In particular, increasing

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[1] By this time, however, the new environmental awareness had so captured the American public that they were flocking to and adversely impacting the very natural environments they wanted to preserve.

numbers of individuals began to seek out the National Parks as locations for action/excitement type activities. Predictably, those holding a strict preservationist attitude opposed any such use. To them, action/ excitement had little to do with park appreciation.

## Action/Excitement: A Current Recreational Trend

Why have action/excitement type activities become so popular? Superficially, the phenomenon can be traced to a growing recreational industry that has multi-faceted interests. One facet of that industry, for instance, is equipment oriented. Using the latest techniques and the newest materials, it has revitalized numerous recreational activities. Equipment is now lighter, stronger, and safer. Those facts alone have contributed to the popularity of some activities. Witness the difference in puncture resistance between an old rubber raft and the new Kevlar designs now on the rivers, or the strength of nylon parachutes as opposed to those made of cottom twill. In other cases, space age technology has resulted in totally new activities, such as hang gliding. Other segments of the same industry have focused on marketing the action/excitement experience. Some cater to professional instruction; others advertise chartered excursions. For those who desire a vicarious experience, there are media specialists who publish magazines that emphasize adventure (Mariah and Adventure Travel) or produce documentary movies (Solo and The Edge).

Yet, the products of this industry are merely the means to achieve certain desired ends. To understand the nature of these "ends" or

what Driver (1976) terms "psychological outcomes" one must examine the social trends that contribute to their importance.

Social observers generally cite two major trends as having the greatest influence on today's society: urbanization and the scientific/technical revolution. Commenting on the latter, Wohl (1975:20) asserts, "In addition to their direct influence on various spheres of the material and socio-economic life, there can also be noticed an indirect influence exerted by the scientific and technical revolution on cultural life and customs as well as on the consciousness of people." Likewise, Stainbrook (1973:105) notes the effect of the current migration to our cities (where more than 80 percent of Americans live). "Administratively and politically cities are becoming more inept and more impotent at the very time when the city must change from a passive-post-crisis adaptation to its tasks to becoming an active, responsive city."

What effect have these trends had on outdoor recreation? One area that has been investigated is the influence of day-to-day stress or overstimulation that is common to most cities. Driver et al. (1975) found that stress-related reasons for engaging in outdoor recreation tended to rank highest in importance among a number of different motivations and activities. Stainbrook (1975:44), on the other hand, looked at job boredom or understimulation and concluded that, "So much of life has become sedentary, inhibiting action. Thrill seeking experiences express an almost desparate need for assertive mastery of something." In a study of automobile assmebly line workers, Grubb (1975) discovered

that as job boredom increased, workers expressed a greater need to engage in activities that were more stimulating than their jobs. To emphasize the importance of stress as a rationale for participation in outdoor recreation, Driver and Tocher (1974:25) made the following statement:

> The authors are convinced that many of our recreational engagements are underlaid by our desire to escape temporarily. The human organism seeks diversion, escape, locomotion, isolation, and disengagement as a means of coping with stress, frustration, or other threats to the biological or physiological integrity of the individual.

In addition, Driver (1976) looked at other functions of outdoor recreation. In his model, recreation is used not only for escape but also to help people to reach certain preferred states that are either unobtainable during non-recreational times or are more easily obtainable through recreational pursuits. To identify these preferred states, Driver has developed the concept of psychological outcomes--a term which refers to the various types of desired satisfactions which may be derived from recreational participation. Itemizing some possible outcomes unavailable through non-leisure, Rettie (1976:72) states that recreation has come to be "one of the primary means by which people can find some sense of individuality, some personal identity, some sense of achievement and fulfillment that takes the place of such things that are often no longer associated with a job."

The fact that some of these outcomes are important for healthy productive life makes recreation something more than mere frivolous activity. In fact, Huxley (1965), Leonard (1975), and Murphy (1977)

see recreation as one of the few activities left to modern man for exploring the limits of both his mental and physical capabilities.

Finally, the prediction of Satterthwaite (1974:108) underscores the role that action/excitement type activities will play in the future. "Activities like scuba diving, gliding, drag racing, may seem like passing fads for a small element of challenge-seeking Americans. Yet the numbers of these people are increasing and will increase. As work becomes more routinized, many an individual will seek the rugged challenge of skill-requiring recreation activities" because "there appears to be many needs for such individual testing and skill displays in this soft and affluent society which engulfs us."

Their potential societal significance, however, does not explain why participants in action/excitement type activities choose natural environments (e.g., National Parks) as their recreational setting. According to Nash that choice is unimportant. "If Lava Falls existed next to the California Freeway, they (the rapid freaks) would be expected to run it with the same relish as in its natural location in the Grand Canyon" (Nash 1977:78). Yet Schreyer et al. (1978:14) believe that natural environments are essential because they provide "outstanding opportunities for challenging situations combined with pleasing sensory involvement." Furthermore, in a previous study, Schreyer et al. (1976) found that, second to action/excitement, experiencing the natural environment was an important aspect of any whitewater river trip. Likewise, Pascall (1977), the Flight Ranger in Yosemite National Park, feels that the majority of hang glider pilots who had flown Glacier Point came to

Yosemite primarily to experience the natural environment. The fact that they had a rather unique perspective only added to the experience.

CHAPTER III

A CONCEPTUAL MODEL OF NATIONAL PARK PERCEPTION

AND THE APPROPRIATENESS OF RECREATIONAL

ACTIVITIES

## Introduction

In order to explore visitor and manager perceptions of the National
Parks and the relationships between these perceptions and their defi-
nitions of appropriate recreational use (one of the study objectives)
a conceptual model has been developed (see Figure 1).  Each of the
variables in this model will be explained below.  A complete description
of how these variables will be operationalized is presented in Chapter
IV.  A discussion of the proposed relationships in the model will
follow the Variable List.

## Variable List

Park Orientation will measure how visitors and managers conceive
of National Parks as "places."  As stated in the Literature Review,
this relationship is based on an individual's experience with that place
which may have been indirect (through magazines, brochures, television,
etc.) or direct (through past visits).

Desired Experience will measure the kinds of experiences that
individuals seek from their visits to a National Park.

Appropriateness Criteria will measure the subjective standards
used to evaluate the appropriateness of particular recreational
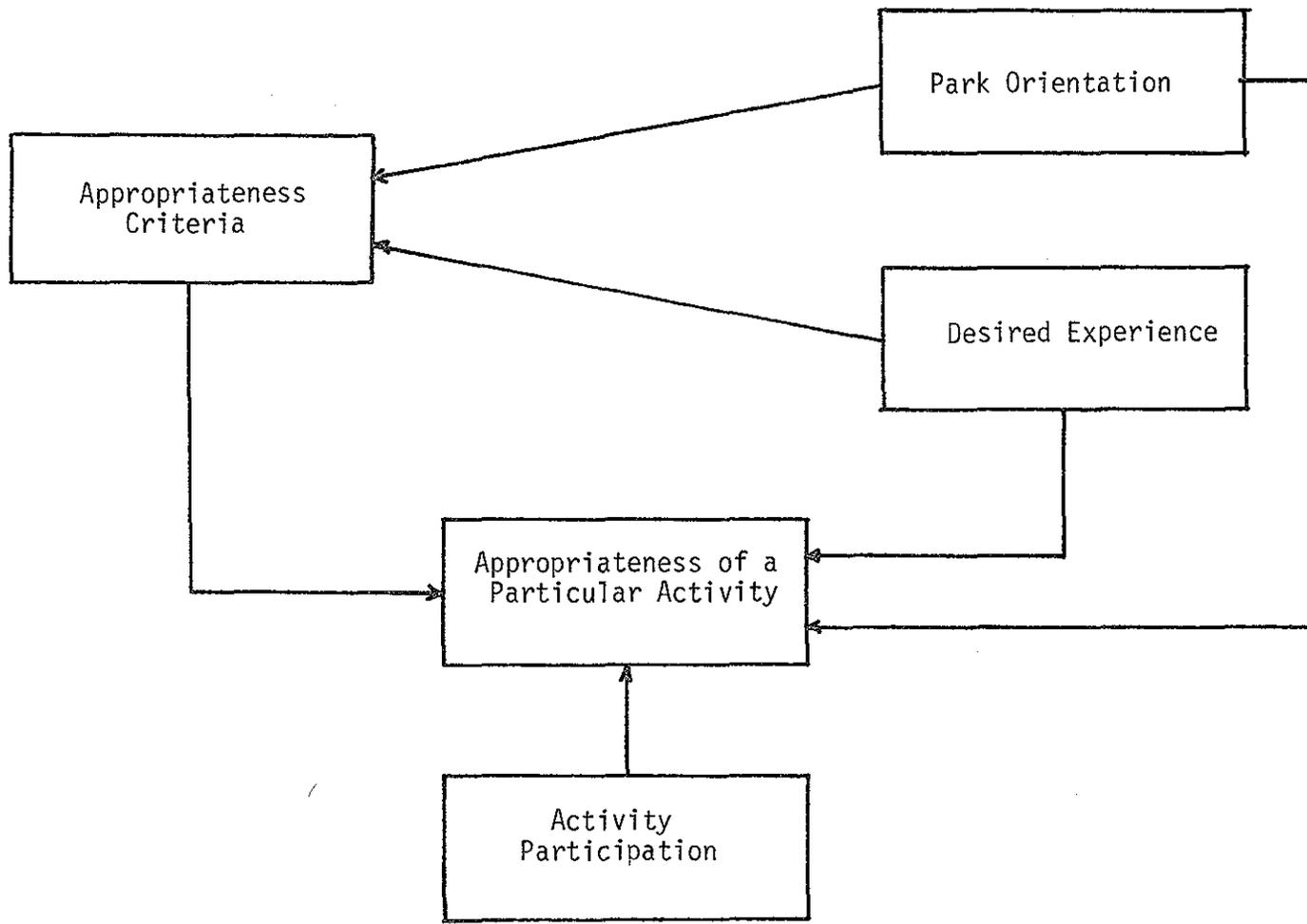
Figure 1.  Activity Appropriateness Model.

activities in the National Parks. In addition, they may provide a more detailed measure of both the visitor's definition of place and his desired experience.

Appropriateness of a Particular Activity will measure the degree to which certain activities are considered appropriate in the National Parks.

Activity Participation will measure the respondent's degree of participation in the activities rated above.

## Relationships Within the Model

The present study is largely exploratory in nature. Therefore, it will not attempt to define the relationships within the model as "if-then" hypotheses. Rather, it will focus on developing a better understanding of each proposed relationship (as outlined below). Despite the existence of supporting evidence for these relationships, more information is needed before predictions can be made.

Appropriateness Criteria/Appropriateness of a Particular Activity will look at the link between an activity's evaluation as a National Park use and the criteria used to make that evaluation. In other words, it will show how the criteria are applied in specific situations.

Park Orientation/Appropriateness Criteria will examine Lee's (1972) assumption that a person's definition of an outdoor recreational place will determine his evaluation of appropriate behavior. In this case that assumption translates to mean the relationship between a

visitor's definition of a National Park and his evaluation of rec-
reational use in the National Parks (a kind of behavior).

Park Orientation/Appropriateness of a Particular Activity will
establish exactly which recreational activities are considered appro-
priate or inappropriate based on a visitor's definition of place.

Desired Experience/Appropriateness Criteria. Several past research
efforts have addressed experience expectations and factors that may
or may not interfere with those expectations. Schreyer (1976) studied
the influence of crowding on the whitewater river running experience;
while Stankey (1973) concentrated on the attitudinal aspects of
wilderness experience. Jacob (1978) examined this relationship in
terms of perceived conflicts between participants in different
activities and the factors that contribute to recreational conflicts.
The present relationship will look at how a visitor's expectations
for a National Park experience relate to his choice of criteria for
judging acceptability of recreational use (actual or potential).

Desired Experience/Appropriateness of a Particular Activity will
single out in more detail the kinds of recreational use (activities)
considered by visitors to be compatible or incompatible with their
desired experiences.

Appropriateness of a Particular Activity/Activity Participation
will examine the influence of a person's participation in an activity
on his evaluation of that activity in the National Parks.

CHAPTER IV

RESEARCH METHODOLOGY

The following chapter will outline the experimental design and the research methods used in this study.

## Research Instrument

### General overview

After careful consideration, an interview format was selected over a mailback questionnaire as the research instrument. The interview itself was designed to accomplish four functions: (1) to generate background information on the visitor and manager population; (2) to establish which activities are considered appropriate or inappropriate in the National Parks; (3) to determine visitor and manager perceptions of the National Park concept; and (4) to measure the variables and to explore the relationships proposed in the model.

Mechanically, the interview was divided into two halves (see Appendix A). The first half consisted of a list of 22 activities (randomly ordered) that ranged from the traditional (hiking, camping, and fishing) to the unusual (hang gliding, nude bathing, and four-wheeling). The second half contained questions aimed at probing the visitor's "definition of a National Park" and his(her) "desired National Park experience;" and at collecting pertinent background information.

The manager interview was similar to the visitor's except for the second half (see Appendix B). For instance, since managers lived

in or near the parks, they were not asked about their "desired National Park experience." Also, the majority of their background questions dealt with their resource management experience.

A pretest of the instrument designed for visitors was conducted on a sample of 22 respondents at Zion National Park on June 15, 1977. Results from this pretest prompted only a few minor changes. However, because they involved the mix of activities, these results were not included in the overall sample. A pretest of the manager interview was not conducted.

Operationalizing the proposed variables

The following section will list the proposed variables as they were operationlized by the interview questions.

Park Orientation. To determine how visitors and managers perceive National Parks as "places," each respondent was asked, In your own words, what do you feel is the purpose of the National Parks? In addition, to ensure a subjective answer, the interviewer stressed that the respondent should use his(her) own interpretation of the National Park purpose, not one that he had heard from the Park Service or from another authoritative source. In fact, it was for this reason that individuals were not asked to define a National Park, for fear of a dictionary type answer.

The choice of the word "purpose" also deserves an explanation. Because National Parks are formally designated, and marked as outdoor recreation places that are administered by a government agency, it is only logical to assume that they serve some meaningful purpose.

Yet, it does not necessarily follow that individuals will internalize the definition or purpose intended by the Park Service. Therefore, an individual's perception of the purpose of the National Parks will reflect how he relates to the parks as places.

Desired Experience. To decipher the kind of experience visitors want from their visit, each respondent was asked, "Why do you visit a National Park?" The word "experience" was not used because it was felt to be too abstract a term for most visitors, and likely to be misleading. Further, the present wording invites other possible rationales for visiting a National Park that may be useful for park management. In other words, it may be entirely possible that some visitors are drawn to the National Parks for purely practical reasons--reasons that do not involve an "experience" yet are certainly relevant to the present study. For instance, the campground facilities may be attractive or convenient for highway touring. The question also specifies National Parks in general to avoid park-specific responses.

Appropriateness of a Particular Activity. To establish to what degree a particular activity is evaluated as appropriate in the National Parks, respondents were asked to rate each activity according to a three-point scale: Always, Depends, Never. The Always category was to be used for those activities that were considered appropriate without any reservations or restrictions. Likewise, the Never category was reserved for those activities considered by the respondent to be completely inappropriate. Realizing that most activities would probably fall between these two extremes, a middle category was created, namely

the Depends category.  In other words, the appropriateness of that
activity in the Parks "depended" on certain conditions or restrictions
being met.

Appropriateness Criteria.  To ascertain the criteria that visitors
use to evaluate the appropriateness of recreational use in the parks,
respondents were asked to give the reasons why they rated a particular
activity as Never or Depends.  There were two reasons for limiting
the discussion to these two ratings:  first, the present study is
primarily interested in "nontraditional use;" and second, this tech-
nique kept the length of the interview within reasonable limits.
Therefore, respondents were not asked why they judged activities as
always appropriate.

Activity Participation.  To estimate a respondent's degree of par-
ticipation in each of the 22 activities, they were asked to rate how
often they engaged in those activities (regardless of location) using
a four point scale:  Never, Seldom, Sometimes, Frequently.  Admittedly,
these categories are crude at best.  However, they were purposely
designed to represent an individual's perception of his participation,
rather than his actual participation.

## The Study Population

Two populations were selected for study:  National Park Service
managers and National Park visitors.  The former group consisted of
park superintendents, assistant superintendents, and unit managers.
Park visitors constituted those individuals onsite at the time of the
interview.  To single out use patterns as a possible variable, park

visitors were stratified into three subpopulations: general park users, backroad users, and trail users. The criteria used to categorize visitors according to these use patterns are listed below.

General Park User: those individuals who were using easily accessible park facilities (visitor centers and campgrounds) or established scenic viewpoints (overlooks and pullouts). Note that this group might also have consisted of individuals who were Backroad Users or Trail Users (as defined below) since respondents were not asked at the time of the interview what other use they had or would make of the park.

Backroad User: those individuals who were taking roads (usually dirt) to see out-of-the-way portions of a park or who were visiting parks that were themselves remote.

Trail Users: those individuals who were hiking on trails that were at least a mile in length.

## The Study Areas

For park managers, nine park units were chosen (six National Parks and three National Monuments), all of which were located in Utah with the exception of Yosemite National Park.[1] Seven park units (five National Parks and two National Monuments) in Utah were established as study areas for park visitors. The breakdown of these park units by subpopulation is presented in Table 1.

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[1] Yosemite was included because of the variety of recreational uses (traditional and nontraditional) that occur there.

Table 1. Park units used for surveying visitor subpopulations.

| Park unit | Subpopulation | | |
| --- | --- | --- | --- |
| | General park user | Backroad user | Trail user |
| Bryce National Park | X | | |
| Capital Reef National Park | X | | |
| Dinosaur National Monument | X | X | |
| Canyonlands National Park | | X | X |
| Natural Bridges National Monument | | X* | |
| Arches National Park | | | X |
| Zion National Park | X | | X |

* Natural Bridges National Monument constituted the "remote park" as defined under the criteria for Backroad Users.

## Sampling Design

Both the distance to the study areas and budget limitations precluded a random sampling schedule. As an alternative, three major trips of 12, 14, and 4 days, respectively, were organized (see Table 2). The sampling period extended from July 19 to September 5 and included 30 sampling days. Trip #1 concentrated on the study areas in southeast Utah while Trip #2 focused on those in southwest Utah. Some overlap, however, did occur between these trips in order to compensate for inclement weather which affected visitation on two of the planned sampling days. Trip #3 was made solely for the purpose of sampling Dinosaur National Monument--a park unit somewhat removed from the other units in Utah.

Table 2.  Sampling schedule.

| Study area | Sampling dates |
| --- | --- |
| Canyonlands National Park | |
| Island-in-the-Sky District | July 19-21 |
| Needles District | July 24-26 |
| | August 16-18 |
| Arches National Park | July 21-22 |
| Natural Bridges National Monument | July 26-27 |
| Capitol Reef National Park | July 29-30 |
| | August 19-21 |
| Bryce National Park | August 22-24 |
| Zion National Park | August 25-29 |
| Dinosaur National Monument | September 2-5 |

## Sampling Procedures

The following section will outline the sampling procedures that were used in all study areas for managers and visitors.  Except where noted, all interviews took place between 8:00 a.m. and 5:00 p.m.

### Visitors

Within the constraint of the target sample size, the group to be interviewed on any particular day was determined randomly.  The target sample sizes were 120 for General Park Users, 40 for Backroad Users, and 40 for Trail Users.  In all cases, however, the target

sample sizes were exceeded to allow for any errors in data collection. The visitor sample was limited to those over 18 years of age.

General park users. Individuals from this group were sampled at three locations: visitor centers, campgrounds, and scenic overlooks. Both the number of individuals interviewed and the days alloted for each location were randomly determined. For the Visitor Center Interviews, a fixed interval scheme was employed. Namely, after each interview, the interviewer would select the tenth individual (adult) to leave the visitor center as the next respondent. This person was then approached and asked if (s)he would cooperate in the study. It was felt that by waiting until the potential respondent had left the visitor center, the attractiveness of the interview situation would be increased. In other words, this would give individuals a chance to relax after travelling, obtain information, and attend to other personal needs before being asked to participate. The overall response rate substantiates the probable benefit of this technique (see Table 3). Unlike the others, the Campground Interviews were conducted between 6:30 p.m. and 9:30 p.m. in order to increase the likelihood that the campsites would be occupied. In this case, every fifth campsite was selected beginning with the lowest number in each campground. In park units with multiple campgrounds, the campground itself was picked randomly on a daily basis. The sampling scheme for the Scenic Overlook Interviews differed slightly from the previous two. In anticipation of a smaller user population, it was decided that there should be no fixed interval between interviews. Instead, the very

next person to arrive at a particular overlook (which were selected randomly on a daily basis) after each interview was approached and asked to participate after (s)he had a chance to enjoy the scenery.

Backroad users. To ensure that potential respondents had spent a certain amount of time in these out-of-the-way areas, it was decided that these interviews should take place at some point well within the area. Therefore, those overlooks or pullouts toward the end of the road were selected. For the same reasons listed above, the sampling scheme was identical to that used for the other overlooks.

Trail users. Except for Canyonlands National Park, interviews with trail users were conducted at locations that were a minimum of 2 miles along a selected trail. The large network of trails in Canyonlands, it was felt, would make it difficult to meet a sufficient number of hikers at any one point in the time allotted. Therefore, the interviewer placed himself at a trailhead from which a number of trails radiated and interviewed potential respondents as they returned. At all locations, however, the relatively low trail user population dictated against a fixed interval sampling scheme. Thus, every trail user that passed the interviewer's location was asked to participate assuming that an interview was not already in progress. With groups, the first person to approach the interviewer was asked to cooperate in the study. In addition, the interview setting was carefully selected so that it was as comfortable as possible, i.e., there was shade and a place for the respondent to sit if he so desired.

Table 3. Visitor and manager sample sizes.

| | Target Sample size | Actual Sample size | Number missed | Refusals |
|---|---|---|---|---|
| **Visitors** | | | | |
| Visitor Center | 120 | 123 | * | 11 |
| Backroad | 40 | 46 | * | 0 |
| Trail | 40 | 42 | * | 1 |
| Total | 200 | 211 | | 12 |
| **Managers** | 15 | 12 | 3 | 0 |

* Because the interviewer was preoccupied during the interview, it was impossible to determine the number of park visitors that passed his location but were not interviewed (i.e., missed).

## Managers

Because of the small number of managers available for a personal, onsite interview, it was decided that every park manager with the National Park Service in Utah would be interviewed. In addition, the higher level managers at Yosemite National Park were included. Unfortunately, three Utah park managers were missed due to several uncontrollable factors.

## The Interview Process

For all sample populations, the interview began with a brief description of the research study (who was conducting it and why).

Next, the respondent was read some preliminary instructions (see Appendix C) to ensure that he understood the activity rating procedure. At this time the list of 22 activities was presented. After the respondent had rated each activity, the interviewer returned to each activity that was rated either Never or Depends to ask for the reasons behind these ratings.[2] Following this discussion, the second half of the interview commenced (see Research Instrument, Chapter III). Following each interview, the respondent was thanked for his(her) cooperation.

The average interview lasted approximately 20 minutes; yet, because the time varied according to the number of activities rated Never or Depends, some interviews lasted as long as 35 minutes while others were as short as 5 minutes. Before each interview, respondents were given the average time if they asked about the length of the interview.

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[2] Note that prior to the activity rating section the respondent was not told that he would be asked to explain his Never or Depends ratings. This procedure was used to circumvent the possibility that some individuals would rate more activities as "always" appropriate to avoid having to explain their rating.

# CHAPTER V

## PROFILES OF THE SAMPLE POPULATION

Before looking at "what was said" it is often useful to establish "who said it." The next two sections will focus on the questions used to characterize the respondents of the two sample populations.

## Visitor Characteristics

Three types of questions were asked: socio-demographic, park use (past and present), and organizational membership. The results of these questions are summarized in Tables 4 through 8 below, with each table divided according to the use pattern of the respondent (i.e., by User Type; see Chapter IV).

Table 4 indicates that most visitors (60.2%) are relatively young (between 20 and 39 years of age), particularly Backroad and Trail ⌐sers. Keep in mind that this percentage is based on a total sample population that excluded those under 18. Therefore, Table 4 is representative of only the adult visitor population.

Table 5 reveals that females consisted of 25.1 percent of the visitor sample. Using previous studies as a guide, this distribution appears to under-represent females. More than likely these results can be explained by problems that surfaced during the interview phase. For instance, in several cases when a female of a husband and wife couple was approached and asked to be interviewed, she would defer to her husband rather than answer the questions herself.

Table 4. Age distribution of visitors by subpopulation for all study areas.

| Age | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| 10 - 19* | 1.6 | 4.3 | 2.4 | 2.4 |
| 20 - 29 | 23.6 | 43.6 | 40.5 | 31.3 |
| 30 - 39 | 34.1 | 23.9 | 19.0 | 28.9 |
| 40 - 49 | 19.5 | 13.0 | 26.2 | 18.4 |
| 50 - 59 | 13.8 | 8.7 | 11.9 | 12.3 |
| 60 - 69 | 7.3 | 6.5 | 0.0 | 5.7 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

* The figures for this age group are misleading, since only those 18 or older were interviewed.

Table 5. Sex distribution of visitors by subpopulation for all study areas.

| | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| Male | 78.0 | 69.6 | 71.4 | 74.9 |
| Female | 22.0 | 30.4 | 28.6 | 25.1 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

Table 6 shows that Californians outnumber visitors from other areas, followed by those living in the Rocky Mountain states (if Utah is included). Not only is California relatively close to Utah, but it also supports a substantial population. Aside from their present residence, visitors were also asked to indicate where they had spent most of their childhood. Table 7 reveals that nearly 40 percent were raised in large cities--a finding that is perhaps a reflection of the general trend towards urbanization since World War II.

Finally, Table 8 presents distribution of visitors according to their occupations. As the table shows, the vast majority of visitors are "white collar workers"--a fairly typical finding in light of previous studies that have looked at occupational status and natural area visitation.

The results found in the next set of tables afford an excellent overview of the majority of National Park visits. Table 9, for instance, points out that few people come to the National Parks alone. In fact, 61.4 percent of the total sample were families--a situation that was even more evident for General Park Users where 73.0 percent were families. Furthermore, according to Table 10, most groups consisted of two individuals (39.3%) followed closely by groups of 4-6 individuals.

Several questions in the interview dealt with the respondent's past National Park visitation.[1] Like those above, the results of these questions offer a useful insight into the typical visit. For

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[1] All figures for past visitation were based on the previous 3 years and included repeat visits.

Table 6.  Geographic distribution of visitors for all study areas.

| Region* or state | All visitors (%) |
|---|---|
| Utah | 9.0 |
| Rocky Mountain | 10.0 |
| Northwest | 2.4 |
| California | 31.8 |
| Southwest | 4.7 |
| Northwest Central | 3.8 |
| Northeast Central | 13.7 |
| Northeast | 10.4 |
| South Atlantic | 8.1 |
| Southwest Central | 5.7 |
| Alaska, Hawaii, Canal Zone | 0.5 |
| | 100.0 |

* Regions are defined as follows:

Rocky Mountain - Colorado, Montana, Wyoming
Northwest - Idaho, Oregon, Washington
Southwest - Arizona, New Mexico, Nevada
Northwest Central - Iowa, Kansas, Minnesota, Missouri, North Dakota, South Dakota, Nebraska
Northeast Central - Illinois, Indiana, Michigan, Ohio, Wisconsin
Northeast - Massachusetts, Rhode Island, New Hampshire, Vermont, Maine, Connecticut, New Jersey, New York, Pennsylvania.
South Atlantic - Alabama, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, Washington, D.C., West Virginia.
Southwest Central - Arkansas, Louisiana, Texas, Oklahoma.

Table 7. Distribution of childhood residence by subpopulation for all study areas.

| Residence | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| Rural | 27.6 | 13.0 | 7.1 | 20.4 |
| Small Town | 17.1 | 28.3 | 16.7 | 19.5 |
| Small City | 18.7 | 21.7 | 23.8 | 20.4 |
| Large City | 36.6 | 37.0 | 52.4 | 39.8 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

Table 8. Occupational distribution of visitors by subpopulation for all study areas.

| Occupation | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| White Collar | 59.4 | 58.7 | 66.7 | 60.7 |
| Blue Collar | 13.8 | 17.4 | 11.9 | 14.2 |
| Service Industries | 8.9 | 6.5 | 4.8 | 7.5 |
| Students | 6.5 | 13.0 | 4.8 | 7.6 |
| Retired | 6.5 | 2.2 | 0.0 | 4.3 |
| Unemployed | 0.8 | 2.2 | 11.9 | 3.3 |
| Other | 4.1 | 0.0 | 0.0 | 2.4 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

Table 9.  Distribution of group type by subpopulation for all study
areas.

| Group type | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| Alone | 6.5 | 15.2 | 19.0 | 11.0 |
| Friends | 12.3 | 21.7 | 35.7 | 19.0 |
| Family | 73.0 | 52.2 | 38.1 | 61.4 |
| Family & friends | 8.2 | 10.9 | 7.1 | 8.6 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 122 | 46 | 42 | 210 |

Table 10.  Distribution of group size by subpopulation for all study
areas.

| Group size | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| 1 (alone) | 5.7 | 15.2 | 19.0 | 10.4 |
| 2 | 35.8 | 45.7 | 42.9 | 39.3 |
| 3 | 13.8 | 4.3 | 11.9 | 11.4 |
| 4 - 6 | 36.6 | 28.3 | 23.8 | 32.3 |
| 7 - 9 | 5.7 | 6.5 | 0.0 | 4.7 |
| 10 - 19 | 2.4 | 0.0 | 2.4 | 1.9 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

example, roughly 75 percent of all respondents made three trips or more to the National Parks during the previous 3 years--an average of at least one trip per year (Table 11). Alone that indicates a fairly extensive experience with the parks; yet Table 12 shows that most respondents (77.8%) spent 2 days or less in the parks they visited. In addition, Table 13 reveals that 45 percent of those interviewed had gone to 10 or more parks over the same 3 year period. From these findings, it appears that although the respondents made frequent trips to the parks, those trips involved relatively short stays at several parks.

Table 11. Distribution of the number of trips taken to visit National Parks in the previous 3 years by subpopulation for all study areas.

| Number of trips | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| 1 | 10.7 | 13.0 | 9.5 | 11.0 |
| 2 | 18.0 | 13.0 | 4.8 | 14.2 |
| 3 | 35.2 | 39.1 | 33.3 | 35.8 |
| 4 | 9.0 | 6.5 | 21.4 | 10.9 |
| 5 | 7.4 | 2.2 | 4.8 | 5.7 |
| 6 - 10 | 13.1 | 13.0 | 19.0 | 14.3 |
| 11 - 15 | 3.3 | 13.0 | 2.4 | 5.2 |
| 16 or more | 3.3 | 0.0 | 4.8 | 2.9 |
| | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 122 | 46 | 42 | 210 |

Table 12. Distribution of average length of stay in parks visited in the previous 3 years by subpopulation for all study areas.

| Average length of stay (in (days) | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| 1 | 50.4 | 58.7 | 28.6 | 47.9 |
| 2 | 29.3 | 19.6 | 42.9 | 29.9 |
| 3 | 15.4 | 13.0 | 19.0 | 15.6 |
| 4 or more | 4.9 | 8.7 | 9.5 | 6.6 |
|  | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

Table 13. Distribution of number of parks visited in last 3 years by subpopulation for all study areas.

| Number of parks visited* | General Park User (%) | Backroad User (%) | Trail User (%) | Total (%) |
|---|---|---|---|---|
| 1 - 4 | 18.7 | 19.6 | 14.3 | 18.0 |
| 5 - 9 | 43.1 | 17.4 | 40.5 | 37.0 |
| 10 - 14 | 20.3 | 30.4 | 21.4 | 22.7 |
| 15 - 19 | 8.1 | 13.0 | 4.8 | 8.5 |
| 20 - 24 | 5.7 | 13.0 | 9.5 | 8.1 |
| 25 + | 4.1 | 6.5 | 9.5 | 5.7 |
|  | 100.0 | 100.0 | 100.0 | 100.0 |
| N = | 123 | 46 | 42 | 211 |

* These amounts include repeat visits.

Lastly, Table 14 displays organizational membership. Incidently, only 35.5 percent of all respondents belonged to any club or organization that related to the outdoors or outdoor activities. A smaller percentage (23.7%) of the respondents had family members other than themselves who belonged to similar clubs. Of those who either belonged themselves or had family members who did, most had joined conservation-type organizations (45.3% and 40.0%, respectively).

Table 14. Distribution of organizational membership by type for respondents and other family members who belonged to outdoor-oriented organizations for all study areas.

| Organizational type* | Respondents | Other family |
|---|---|---|
| Conservation | 45.3 | 40.0 |
| Activity | 36.0 | 34.0 |
| Service | 18.7 | 26.0 |
| | 100.0 | 100.0 |
| N = | 75 | 50 |

* Organizational types are defined as follows:

   Conservation - Audubon, Wilderness Society, Sierra Club, National Wildlife Federation, Environmental Defense Fund, and other state and local conservation clubs.

   Activity - NRA, Good Sam, and local rod and gun clubs, 4wd and dirt bike clubs, scuba clubs, etc.

   Service - BSA, GSA, 4-H, YCC, etc.

## Manager Characteristics

The manager population consisted of seven superintendents, three unit managers, and two assistant superintendents; they were asked three kinds of background questions: their education, where they spent most of their childhood, and their resource management experience.

Educationally, 10 of the 12 managers had attained a 4 year college degree and a third had completed some graduate work. Their major fields of emphasis, however, were quite varied--ranging from wildlife management to engineering. Unlike the visitors, 7 of the 12 managers were from rural backgrounds, while only two were raised in large cities.

In terms of previous work experience, 7 of the 12 had all their professional, full-time employment with the National Park Service. Those who had other experience spent that time with the Fish and Wildlife Service, the U. S. Forest Service, and private business. The range of years spent with the Park Service varied from 10 to 33 years with most managers (67%) having over 15 years in service. For the majority, their careers covered between five and seven National Park units.

Table 15 summarizes the geographical location of the park units (by region) where the managers had had their previous experience. The regions most heavily represented were the Rocky Mountain Region, the Western Region, and the Southeastern Region.

Table 15.  Previous park experience by region.*

| Number of park units by region | Rocky Mountain | Pacific Northwest | Western | Mid-western | South-western | North Atlantic | South-eastern | Mid-Atlantic |
|---|---|---|---|---|---|---|---|---|
| 0** | 2 | 11 | 3 | 11 | 8 | 9 | 4 | 9 |
| 1 | 4 | 1 | 4 | 1 | 3 | 3 | 7 | 3 |
| 2 | 3 | - | 2 | - | 1 | - | 1 | - |
| 3 | 3 | - | 3 | - | - | - | - | - |
| Total | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

 * Does not include present park unit.

** A zero indicates no experience in that region.  For example, two managers had no experience in the Rocky Mountain region.

Table 16 indicates how much experience (by number of units) managers had with particular types of park units. The results show that most of that experience was with the National Parks and Monuments. In fact, the 12 managers as a group had experience with 31 National Parks and 14 National Monuments.

Table 16. Previous park experience by type of unit.*

| Number of park units by type | National Parks | National Monuments | Historic Parks | Recreation Areas | National Seashores | National Battlefields | National Parkways |
|---|---|---|---|---|---|---|---|
| 0** | 1 | 4 | 9 | 9 | 9 | 10 | 8 |
| 1 | 2 | 3 | 3 | 2 | 2 | 2 | 4 |
| 2 | 4 | 4 | - | 1 | 1 | - | - |
| 3 | 2 | 1 | - | - | - | - | - |
| 4 | 3 | - | - | - | - | - | - |
| Total | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

* Does not include present park unit.

** A zero indicates no experience in that kind of park unit.

CHAPTER VI

ACTIVITY APPROPRIATENESS RATINGS AND

NATIONAL PARK PERCEPTIONS

The present chapter will review the results that pertain to the first two objectives of this study: (1) to ascertain the kind of activities that are considered inappropriate in the National Parks; and (2) to establish manager and visitor perceptions of the National Park concept.

## Activity Appropriateness Ratings

### Visitor responses

Table 17 summarizes how visitors rated 22 activities according to whether they were always or never appropriate in the parks. Note that the difference in percentage between these two ratings is due to he absence of the depends category--an omission made for simplicity's sake. In addition, each activity was given a ranking based on their appropriateness rating.

Based on the never appropriate ranking, the seven activities in the list rated as most inappropriate in the National Parks were: trail biking, snowmobiling, water skiing, nude bathing, power boating, four wheeling, and hang gliding. The reasons behind these ratings will be outlined in Chapter VII.

The results are self-explanatory. However, it is important to realize that, despite the rankings, in no case did a majority of the

Table 17 .  Appropriateness ratings and ranking by activity (visitors).

| Activity | Rating | | | |
| | Never | | Always | |
| | Percent | Rank | Percent | Rank |
| --- | --- | --- | --- | --- |
| Trail biking | 47.9 | 1 | 8.1 | 19 |
| Snowmobiling | 39.8 | 2 | 7.1 | 20 |
| Water skiing | 37.0 | 3 | 5.2 | 22 |
| Nude bathing | 33.6 | 4 | 13.7 | 16 |
| Power boating | 32.7 | 5 | 5.7 | 21 |
| Four wheeling | 32.2 | 6 | 9.5 | 18 |
| Hang gliding | 28.4 | 7 | 13.3 | 17 |
| Downhill skiing | 13.7 | 8 | 25.6 | 15 |
| Sail boating | 4.3 | 9 | 45.5 | 11 |
| Rock climbing | 2.8 | 10 | 37.9 | 13 |
| Scuba diving | 2.8 | 10 | 33.6 | 14 |
| Swimming | 1.4 | 11 | 42.7 | 12 |
| X-C skiing | 1.4 | 11 | 60.7 | 8 |
| Jogging | 1.4 | 11 | 78.7 | 4 |
| Camping (auto) | 0.5 | 12 | 73.0 | 5 |
| Fishing | 0.5 | 12 | 66.8 | 7 |
| Canoeing/kayaking | 0.5 | 12 | 49.3 | 10 |
| Cave exploring | 0.5 | 12 | 51.2 | 9 |
| Bicycling | 0.0 | 13 | 71.1 | 6 |
| Backpacking | 0.0 | 13 | 79.2 | 3 |
| Picnicking | 0.0 | 13 | 85.5 | 2 |
| Hiking | 0.0 | 13 | 88.8 | 1 |

respondents rank any activity as completely inappropriate. For example, although water skiing was ranked fifth in inappropriateness, 63 percent of the respondents still felt that it was either completely appropriate (5.2%) or appropriate with certain restrictions (57.8%). In other words, the rankings are only meaningful in relation to the other activities.

## Manager responses

Table 18 summarizes how the managers rated the same 22 activities. Their ratings were similar, yet some differences did occur. Namely, only one manager totally objected to power boating, and two to snow-mobiling. Also, the majority of managers rejected trail biking and water skiing as appropriate uses of the National Parks. Keep in mind, however, that the sample size was extremely small. Again, the reasons for these ratings will be given in Chapter VII.

## National Park Perceptions

### Visitor responses

Two questions were targeted towards an understanding of how visitors perceive the National Parks. First, each respondent was asked to explain, in his own words, what he felt was the purpose of the National Parks. Table 19 outlines the responses to this question. Furthermore, the groupings in this table are not artificial categories. Instead, they reflect the actual answers given by the respondents.

Based on the twin missions of the National Park Service, the responses could be classified as having either a preservation or a

Table 18.  Appropriateness ratings and ranking by activity (managers).*

|  | Rating | | | |
|  | Never | | Always | |
| Activity | Frequency | Rank | Frequency | Rank |
|---|---|---|---|---|
| Trail biking | 7 | 1 | 0 | 10 |
| Water skiing | 7 | 1 | 0 | 10 |
| Nude bathing | 6 | 2 | 1 | 9 |
| Four wheeling | 4 | 3 | 0 | 10 |
| Hang gliding | 4 | 3 | 0 | 10 |
| Snowmobiling | 2 | 4 | 0 | 10 |
| Power boating | 1 | 5 | 0 | 10 |
| Downhill skiing | 1 | 5 | 1 | 9 |
| Rock climbing | 1 | 5 | 2 | 8 |
| Swimming | 0 | 6 | 1 | 9 |
| Scuba diving | 0 | 6 | 3 | 7 |
| Sail boating | 0 | 6 | 5 | 5 |
| Camping (auto) | 0 | 6 | 5 | 5 |
| Cave exploring | 0 | 6 | 5 | 5 |
| Canoeing/kayaking | 0 | 6 | 4 | 6 |
| X-C skiing | 0 | 6 | 8 | 4 |
| Fishing | 0 | 6 | 8 | 4 |
| Bicycling | 0 | 6 | 8 | 4 |
| Backpacking | 0 | 6 | 8 | 4 |
| Hiking | 0 | 6 | 10 | 3 |
| Jogging | 0 | 6 | 11 | 2 |
| Picnicking | 0 | 6 | 12 | 1 |

* Due to the small sample size of 12 managers, absolute frequencies
  rather than percentages are used.

Table 19.  Purpose of the National Parks (visitors).

| Responses* | Frequency (responses) | Percent response (N=403) | Percent respondents** (N=210) |
|---|---|---|---|
| National Parks are for ... | | | |
| preservation (non-specific) | 84 | 20.8 | 39.8 |
| preservation (future generations) | 19 | 4.7 | 9.0 |
| preservation (unique scenery) | 11 | 2.7 | 5.2 |
| preservation (wilderness) | 5 | 1.2 | 2.4 |
| preservation (beauty) | 48 | 11.9 | 22.7 |
| preservation (wildlife) | 6 | 1.5 | 2.8 |
| preservation (science) | 9 | 2.2 | 4.3 |
| TOTAL (Preservation) | 182 | 45.2 | 72.0*** |
| enjoyment | 121 | 30.0 | 57.3 |
| education | 16 | 4.0 | 7.6 |
| recreation | 37 | 9.2 | 17.5 |
| introspection | 7 | 1.7 | 3.3 |
| escape | 19 | 4.7 | 9.0 |
| relaxation | 16 | 4.0 | 7.6 |
| resourcefulness | 2 | 0.5 | 0.9 |
| health | 3 | 0.7 | 1.4 |
| TOTAL (Use) | 221 | 54.8 | 80.1*** |

  * For a complete description of these categories, see Appendix  D.

 ** Percentages in this column are greater than "Percent response" due to multiple responses.

*** These figures do not represent percentage totals.  Rather, they indicate the proportion of respondents who mentioned preservation or use, respectively.

use emphasis. According to the results, those interviewed favored use (80.1%) over preservation (72.0%). Beyond that comparison, a close look at the three most mentioned purposes reveals that most visitors had extremely generalized perceptions of the National Parks. For instance, 57.3 percent of the respondents saw National Parks as places "for people to see and enjoy." In light of the typical visit, that finding is understandable. Short term visits to several parks per trip preclude, in most cases, the kind of on-site exposure (sensory or conceptual) necessary to develop a "sense of place" concerning the National Parks. Of course, there are other sources of conceptual information (e.g., magazines, brochures, etc.). Yet, the results indicate that those sources were either not used or were not useful for formulating a sense of place.

The wording used by respondents to the park purpose question was also analyzed. Here several "key words" were chosen because of their symbolic connection to the National Parks (see Table 20). For each word, a positive response was recorded if the respondent mentioned that word exactly. Although this method of content analysis is restrictive by design, the results are consistent with the most important perceptions listed in Table 19. That is, the ideas of preservation, availability to the general public, nature, beauty, and enjoyment were strongly associated with the National Parks. What is perhaps more interesting are the words that were rarely mentioned, such as wilderness,

Table 20. Purpose of the National Parks: content analysis of visitor responses.

| Key word | Frequency | Percent |
| --- | --- | --- |
| Preserve | 131 | 62.1 |
| Public | 113 | 53.6 |
| Nature/natural | 90 | 42.7 |
| Beauty | 57 | 27.0 |
| Enjoy | 51 | 24.2 |
| Recreation | 38 | 18.0 |
| Future | 20 | 9.5 |
| Escape | 18 | 8.5 |
| Environment | 18 | 8.5 |
| Education | 13 | 6.2 |
| Access | 10 | 4.7 |
| Wildlife | 8 | 3.8 |
| Unique | 7 | 3.3 |
| Wilderness | 6 | 2.8 |
| Geology | 4 | 1.9 |

wildlife, unique, geology, and education.  Again, it appears that
visitors have only generalized perceptions regarding National Parks
(a very specialized kind of resource).

Whereas the previous question was aimed at the respondent's con-
ceptual orientation towards the National Parks, the second question
of this set was designed to capture a more pragmatic and, perhaps,
a more personal view of the parks.  It asked, "Is there a particular
reason why you go to a National Park?"

As Table 21 indicates, "scenery" was the most important motive
for visiting a National Park.  In fact, 75.4 percent of all respondents
mentioned something to do with "relationships with nature," followed by
"park facilities" (20.9 %) and "escape" (20.4%).[1]  Though a fairly
common reason for visiting the parks, "escape" was not mentioned much
as a purpose of the parks (Table 19).  This distinction may provide a
clue to the appropriateness ratings, in that the generalized defini-
tions of park purposes may have little relationship to the specific
motivations for park visitation.

The fact that viewing the scenery was so important is not surprising.
In fact, it is entirely in keeping with the generalized National Park
purpose held by most of the respondents, i.e., National Parks are
"for people to see and enjoy."  Furthermore, the nature of the typical
visit (short--to allow for visits to other parks on the same trip)
suggests that it is just long enough for one to see the prominent
features (scenery) of the park before leaving.

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[1] Driver's (1976) research into the psychological outcomes desired
from recreational participation provided the major categories for this
table and basis for assigning the responses to the categories.  For a
complete description of this process, see Appendix  E.

Table 21. Reasons for visiting a National Park.

| Response* | Frequency (responses) | Percent responses (N=361) | Percent respondents** (N=211) |
|---|---|---|---|
| **Facilities** | | | |
| Physical resources | 27 | 7.5 | 12.8 |
| Management Practices | 29 | 8.0 | 13.7 |
| Accessibility | 2 | 0.6 | 0.9 |
| Personnel | 3 | 0.8 | 1.4 |
| | 61 | 16.9 | 20.9*** |
| **Recreation** | | | |
| Active | 11 | 3.0 | 5.2 |
| Passive | 11 | 3.0 | 5.2 |
| | 22 | 6.0 | 10.0*** |
| **Relationships with nature** | | | |
| Scenery | 129 | 35.7 | 61.1 |
| General nature experience | 40 | 11.1 | 19.0 |
| Learn about nature | 15 | 4.2 | 7.1 |
| | 184 | 51.0 | 75.4*** |
| **Learning-discovery** | | | |
| Exploration | 20 | 5.5 | 9.5 |
| **Escape physical and mental pressures** | | | |
| Daily routine | 14 | 3.8 | 6.6 |
| Physical stressors | 13 | 3.6 | 6.2 |
| Physical rest | 7 | 1.9 | 3.3 |
| Tranquility | 10 | 2.8 | 4.7 |
| Privacy | 10 | 2.8 | 4.7 |
| | 54 | 14.9 | 20.4*** |
| **Other** | | | |
| Introspection | 7 | 1.9 | 3.3 |
| Family togetherness | 6 | 1.7 | 2.8 |
| Meeting new people | 2 | 0.6 | 0.9 |
| | 15 | 4.2 | 7.0*** |

Table 21. Continued.

| Response* | Frequency (responses) | Percent responses (N=361) | Percent respondents** (N=211) |
|---|---|---|---|
| No particular reason | 5 | 1.4 | 2.4 |

  * For a complete description of these categories, see Appendix E.

 ** Percentages in this column are greater than "Percent response" due to multiple responses.

*** These figures do not represent percentage totals. Rather, they indicate the proportion of respondents who mentioned that particular major category.

Other commentators support this explanation. Nash (1977) feels that there is historical precedence for this kind of park experience. He contends that for much of their history the National Parks were considered synonomous with scenic wonders and little more. Apparently, this connection has endured for the majority of those interviewed. Today, thanks to easy access and convenient pull-outs, it is possible to see most of a park's distinguishing features in a day or so. To Tuan (1974:95), "such brushes with nature clearly fall short of the authentic." Unfortunately, he also believes that most modern tourism is also "little more than the acceptance of a social convention" to collect National Parks with photos and bumper stickers rather than to actually experience the park environment. The Conservation Foundation (1972:32) apparently agreed in its appraisal of the National Parks on the occasion of their 100th anniversary. Parks for many visitors were becoming just "one of a dozen vacation stops, one more decal on the window, one more place for later comparison as to the efficiency of trailer hook-up, quality of cafeteria, variety of souvenirs and congestion of highway and campground."

Manager responses

Table 22 reveals that managers had a slightly different orientation with respect to the National Parks than did the visitors. Although every manager mentioned both use and preservation, as a whole they favored the latter (as measured by the number of responses that emphasized that purpose). However, of all the responses, "for people to see and enjoy" was still the most mentioned purpose, followed

Table 22.  Purpose of the National Parks (managers).

| Response* | Percent (responses) | Percent response (N=31) | Percent respondents** (N=12) |
|---|---|---|---|
| National Parks are for ... | | | |
| preservation (non-specific) | 4 | 12.9 | 33.3 |
| preservation (future generations | 6 | 19.4 | 50.0 |
| preservation (unique scenery) | 1 | 3.2 | 8.3 |
| preservation (wilderness) | - | - | - |
| preservation (beauty) | 2 | 6.5 | 16.7 |
| preservation (wildlife) | - | - | - |
| preservation (science) | 3 | 9.7 | 25.0 |
| TOTAL (Preservation) | 16 | 51.7 | 100.0*** |
| enjoyment | 8 | 25.8 | 66.7 |
| education | 2 | 6.5 | 16.7 |
| recreation | 3 | 9.7 | 25.0 |
| introspection | - | - | - |
| escape | 1 | 3.2 | 8.3 |
| relaxation | 1 | - | - |
| resourcefulness | - | - | - |
| health | - | - | - |
| TOTAL (Use) | 14 | 45.2 | 100.0*** |

* For a complete description of these categories, see Appendix D.

** Percentages in this column are greater than "Percent response" due to multiple responses.  This also explains why the percentage for total use exceeds 100 percent.

*** These figures do not represent percentage totals.  Rather, they indicate the proportion of respondents who mentioned preservation or use, respectively.

by "preservation for future generations." In light of the Park Service's founding legislation, both these responses were predictable.

Table 23 summarizes the key words used by managers in their responses to this same question. As would be expected, they included the public, preserve, enjoy, and future.

As with the visitors, the park managers used very broad concepts to define the National Park purpose. Given their intimate contact with that resource, one would expect more precise definitions. Therefore, it is possible that the questions themselves were responsible for the kind of answers received. In other words, the questions asked were purposely open-ended to prevent a structured response, yet their very open-endedness may have prompted the non-specific type answers.

Therefore, a better indicator of how visitors and managers perceive National Parks may be the criteria they use to judge the appropriateness of recreational activities. That assumption will be explored in the next chapter.

Table 23. Purpose of the National Parks: content analysis of manager responses.

| Key word | Frequency |
|----------|-----------|
| Public | 12 |
| Preserve | 10 |
| Enjoy | 7 |
| Future | 5 |
| Nature/natural | 3 |
| Environment | 2 |
| Recreation | 2 |
| Wildlife | 2 |
| Escape | 2 |
| Wilderness | 1 |
| Access | 1 |
| Education | 1 |
| Beauty | 1 |
| Geology | 0 |
| Unique | 0 |

CHAPTER VII

VISITORS AND THE ACTIVITY APPROPRIATENESS MODEL

## Introduction

As mentioned in Chapter III, a conceptual model was developed as a tool to examine the third major objective of this study: to look at the relationships between park perceptions and the factors that influence and individual's definition of appropriate recreation use of the National Parks.

The following six sections will explore each relationship outlined in the model. Where the relationships call for the analysis of particular activities, only the seven most inappropriate will be used, for two reasons: (1) in terms of appropriateness, they set themselves apart from the other activities; and (2) the primary focus of the study is "nontraditional use," not recreational use in general. Also, because very few respondents rated these activities as always appropriate, only the depends and never ratings will be discussed.

Due to the occurrence of multiple responses to two of the five variables, desired experience and appropriateness criteria, statistical analysis is possible in only two cases. For these relationships, Chi-square will constitute the test of significance and gamma the measure of association. The other four relationships will be discussed qualitatively since multiple responses violate the assumption of independence.

## Appropriateness Critera/Appropriateness
## of a Particular Activity

### Overview

Because respondents were asked to explain why they rated an activity as either completely inappropriate (the never rating) or appropriate with certain restrictions (the depends rating), it is possible to examine the reasons why the seven activities were rated as they were. At the same time, it may be possible to get a better understanding of visitors' images of the National Parks. In other words, the criteria against which visitors measure the appropriateness of certain activities may prove to be better indicators of their park perceptions than their vague responses to the direct questions about the purpose of the National Parks and the reasons for visiting them (see Chapter VI).

Table 24 displays the criteria used for the never appropriate rating, for each of the seven activities. The 20 individual criteria reflect the actual reasons given for a particular rating (i.e., data reduction was minimal). Some of the specific comments that were grouped under these criteria are shown in Appendix F. To facilitate subsequent analysis, the 20 individual criteria have been further divided into five major categories or criteria. No statistical technique (e.g., cluster analysis) was employed to make this division since the individual criteria were conceptually linked to the major categories. For example, "facilities" was classified under the major category, environmental damage, because respondents felt that certain

activities would require physical development that would adversely impact the resource.

The major category, personal dislike, also needs to be explained. As mentioned earlier, respondents were read specific instructions prior to rating the 22 activities. These instructions (see Appendix C) stated that for the purpose of the study respondents should consider only National Parks in their deliberations. However, when asked to explain the reasons behind their ratings, some respondents expressed a profound dislike for an activity or its participants, regardless of its location. To separate these criteria, the personal dislike category was created. The four other headings are directly related to the National Parks.

Table 25 lists the criteria used for the depends rating. The same logic as above was used for selecting both the 24 individual criteria and the five major categories. In this case, however, the individual criteria represent restrictions or limitations that visitors felt must be imposed before they would accept an activity as appropriate in the National Parks.

Again, the category, personal concerns, needs to be defined. As with the personal dislike category, this criteria applied to reasons that were independent of location. However, it was applied to only one activity--nude bathing. Respondents who cited the restrictions under the category did so for personal (usually moral) reasons.

When examining the results, it is important to realize that respondents were permitted multiple responses (up to three). In other

Table 24. The relationship between appropriateness criteria and the "never" appropriate rating by activity (visitors).*

| Appropriateness criteria** | Activity | | | | | | |
|---|---|---|---|---|---|---|---|
| | Trail biking (N=101) (%) | Snowmobiling (N=84) (%) | Water skiing (N=78) (%) | Nude bathing (N=71) (%) | Power boating (N=69) (%) | Four-wheeling (N=68) (%) | Hang gliding (N=60) (%) |
| Environmental damage | | | | | | | |
| Non-specific | 62.4 | 60.7 | 12.8 | - | 13.0 | 83.8 | - |
| Pollution | 5.9 | 6.0 | 34.6 | 1.4 | 39.1 | 2.9 | - |
| Wildlife | 10.9 | 14.3 | 2.6 | - | 2.9 | 5.9 | - |
| Erosion | 5.9 | 2.4 | - | - | - | 4.4 | 1.7 |
| Facilities | - | 1.2 | 1.3 | - | 1.4 | - | - |
| Administrative problems | | | | | | | |
| Rescue costs | - | 3.6 | - | - | - | - | 11.7 |
| Control | 8.9 | 7.1 | - | 1.4 | - | 8.8 | 3.3 |
| Operations costs | - | 7.1 | - | - | - | 1.5 | 1.7 |
| Safety aspects | | | | | | | |
| Safety of spectators | 4.0 | 3.6 | 6.4 | - | 8.7 | 4.4 | 10.0 |
| Safety of participants | 1.0 | - | - | - | - | - | 36.7 |
| Personal dislike | | | | | | | |
| Dislike activity | 5.0 | 8.3 | 7.7 | 40.8 | 5.8 | 5.9 | 3.3 |
| Dislike participants | 5.0 | 1.2 | 2.6 | 4.2 | 2.9 | 1.5 | - |
| Fumes, dust, noise | 2.0 | 2.4 | 3.8 | - | 4.3 | 2.9 | - |
| Park enjoyment | | | | | | | |
| Mood of National Parks | 10.9 | 13.1 | 20.5 | 4.2 | 14.5 | 16.2 | 31.7 |
| Conflicts with others | 17.8 | 9.5 | 16.7 | 49.3 | 15.9 | 7.4 | 3.3 |
| Too commercial | - | - | 3.8 | - | 4.3 | - | 3.3 |
| Congestion | 1.0 | 1.2 | 5.1 | 1.4 | 5.8 | 1.5 | 8.3 |
| Lack appreciation | - | - | 2.6 | 1.4 | 1.4 | - | - |
| Visual intrusion | 1.0 | 1.2 | 3.8 | - | 2.9 | - | 16.7 |
| Fumes, dust, noise | 54.5 | 50.0 | 61.5 | - | 65.2 | 33.8 | - |
| Total responses | (200) | (157) | (146) | (74) | (130) | (123) | (85) |

* All percentages are based on the sample of respondents who ranked that activity as never appropriate.

**For a complete description of these categories, see Appendix F.

Table 25. The relationship between appropriateness criteria and the "depends" appropriate rating by activity (visitors).*

| Appropriateness criteria** | Activity | | | | | | |
|---|---|---|---|---|---|---|---|
| | Trail biking (N=90) (%) | Snowmobiling (N=111) (%) | Water skiing (N=120) (%) | Nude bathing (N=111) (%) | Power boating (N=129) (%) | Four-wheeling (N=123) (%) | Hang gliding (N=122) (%) |
| Environmental damage | | | | | | | |
| No damage (non-specific) | 23.3 | 27.0 | 6.7 | 1.8 | 7.8 | 22.0 | 8.1 |
| No pollution | 3.3 | 1.8 | 8.3 | - | 10.1 | - | - |
| No wildlife damage | 4.4 | 11.7 | - | - | 0.8 | 2.4 | - |
| No facilities | 1.1 | 1.8 | 0.8 | - | 1.6 | - | 0.8 |
| Certain trails | 25.6 | 6.3 | - | - | - | 28.5 | - |
| Certain areas | 20.0 | 9.0 | 5.8 | - | 7.0 | 24.4 | 0.8 |
| Certain parks | 1.1 | 0.9 | 0.8 | - | 1.6 | 4.1 | - |
| For access only | 3.3 | 0.9 | - | - | 0.8 | 8.9 | - |
| Administrative problems | | | | | | | |
| Rescue costs and responsibility | - | 0.9 | - | - | - | - | 5.7 |
| Control | - | - | 0.8 | - | 0.8 | - | - |
| Safety aspects | | | | | | | |
| Spectator safety | 4.4 | 2.7 | 14.2 | - | 11.6 | 3.3 | 10.6 |
| Skill and equipment requirements | 1.1 | 1.8 | 0.8 | - | 0.8 | 0.8 | 18.9 |
| Safe areas | 4.4 | 12.6 | 9.2 | - | 6.2 | - | 40.2 |
| Direct supervision | - | 1.8 | 0.8 | - | 0.8 | - | 4.9 |
| Personal concerns | | | | | | | |
| Restricted areas | - | - | - | 18.0 | - | - | - |
| Remote areas | - | - | - | 9.0 | - | - | - |
| Park enjoyment concerns | | | | | | | |
| No conflicts | 24.4 | 29.7 | 36.7 | 67.6 | 35.7 | 14.6 | 9.8 |
| Controls on numbers | 1.1 | 2.7 | 7.5 | - | 9.3 | 1.6 | 4.1 |
| Controls on commercialism | 1.1 | 0.9 | 4.2 | - | 3.9 | - | 3.3 |
| Controls on fumes, dust, noise | 18.9 | 15.3 | 18.3 | - | 27.1 | 3.3 | - |
| Controls on litter | 1.1 | 1.8 | - | - | 1.6 | 1.6 | 1.6 |
| Certain areas or trails | 27.8 | 27.9 | 57.5 | 42.3 | 55.0 | 17.9 | 21.3 |
| Certain parks | 1.1 | 4.5 | 3.3 | - | 2.3 | 2.4 | 1.6 |
| Remote areas | 3.3 | 5.4 | 1.7 | 24.3 | 1.6 | 4.1 | 0.8 |
| Total Responses | (154) | (187) | (215) | (181) | (241) | (172) | (162) |

* All percentages based on the sample of respondents who rated that activity as depends.

** For a complete description of these categories, see Appendix F.

words, even though the percentages are based on respondents, they will not add to 100 percent.

## Results

The Never rating. Table 24 indicates that the activities could be broken down into three groupings based on the criteria used to rate them: the motorized activities, nude bathing, and hang gliding. In general, the motorized activities were felt to be (1) environmentally damaging, in general (i.e., non-specific); (2) too dusty or noisy; and (3) causing conflicts with other uses in the parks. A few other results are worth mentioning. Although four-wheeling was ranked above the other motorized activities in appropriateness, roughly 84 percent of those who were opposed to it in the parks felt it was damaging overall to the environment--a larger percent than any other activity. Trail biking (the other non-winter, land based activity) ranked a distant second to four-wheeling in environmental impacts, yet considerably higher in potential conflicts and in fumes, dust, and noise. In addition, power boating with or without water skiiers was believed to cause too much pollution.

As expected, the respondents who objected to nude bathing disliked the activity wherever it occurred and thought it would create conflicts with other park users. Finally, the major complaint against hang gliding was participant safety. Respondents apparently felt that hang gliding was too dangerous a sport for the Park Service to manage. Also, 19 respondents or about 32 percent of those against it, said that hang gliding would interfere with the mood of the parks. A smaller

percent (16.7) were more specific. They saw hang gliding as a potential visual intrusion on park enjoyment.

The Depends rating. According to the results displayed in Table 25, the most often mentioned restrictions across the board were no environmental damage, certain areas or trails, no conflicts, and controls on fumes, dust, and noise. In particular, respondents felt that the land based, motorized activities needed controls to prevent environmental damage. Power boating, however, received the strongest sanctions against noise, followed by trail biking. With the exception of four-wheeling and hang gliding, respondents were also concerned about conflicts with other uses. Some specified the restriction of certain areas or trails as a possible solution to potential conflicts, especially in the cases of power boating and water skiing. Limiting activities to particular areas or trails was also used to limit environmental damage for trail biking and four-wheeling. Finally, those who rated hang gliding as depends said they would impose skill and equipment requirements and limit it to safe areas to minimize injuries.

## Conclusion

From the above discussion, it appears that some respondents had fairly well-defined ideas in mind when they rated an activity. Quite a few, however, gave rather vague reasons. The non-specific, environmental damage criteria, for instance, was used frequently for both the never and depends ratings. There are two possible reasons for this: respondents were unsure about an activity's exact impacts, or they were convinced that the impacts were so widespread that particulars were not

necessary. A number of respondents also assumed that there would be conflicts with other uses without articulating the nature of those conflicts.

In spite of these reservations, the appropriateness criteria give a much better indication of how some visitors perceive the parks than their answers to the direct perception questions (Chapter VI). They were against damage to the parks--a feeling that reinforces preservation as a park purpose. Yet, many respondents seemed to be equally concerned about park enjoyment--for both themselves and others. As a whole, they weren't against nontraditional use as long as there were certain controls.

## Park Orientation/Appropriateness Criteria

### Overview

For the present relationship, a five point "park orientation" scale has been developed from the park purpose question. Based on how many of the three responses related to preservation or use, a respondent was categorized as either high preservation, medium preservation, balanced, medium use, or high use. (The exact method used to make these distinctions is outlined in Appendix G .) Although the validity of this technique has not been tested, the assumption is that a person who cites three park purposes that all deal with preservation has a high preservation orientation towards the National Parks. The same holds for the other points on the scale. The resulting overall distribution of respondents is as follows: high preservation (19.4%), medium

percent (16.7) were more specific. They saw hang gliding as a potential visual intrusion on park enjoyment.

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## Park Orientation/Appropriateness Criteria

### Overview

For the present relationship, a five point "park orientation" scale has been developed from the park purpose question. Based on how many of the three responses related to preservation or use, a respondent was categorized as either high preservation, medium preservation, balanced, medium use, or high use. (The exact method used to make these distinctions is outlined in Appendix G .) Although the validity of this technique has not been tested, the assumption is that a person who cites three park purposes that all deal with preservation has a high preservation orientation towards the National Parks. The same holds for the other points on the scale. The resulting overall distribution of respondents is as follows: high preservation (19.4%), medium

preservation (10.0%), balanced (35.5%), medium use (7.1%), and high use (27.5%). The park orientation variable also permits an evaluation of how the respondents perceive parks as "places." In other words, are they places primarily for preservation or use, or combinations in between?

The appropriateness criteria are identical to the major categories in Tables 24 and 25 and, therefore, subsume the individual criteria that are clustered under them.

The results in Tables 26 and 27 will show how a person's generalized perceptions (park orientation) relate to the specific criteria he uses to judge the appropriateness of a certain kind of behavior, namely types of recreation activities. Since the appropriateness criteria are linked to the activities, the following discussion will be by activity, with differences being noted where they exist. Keep in mind, however, that this analysis is qualitative, since no statistical test is possible; all table percentages are based on responses, not respondents.

## Results

The Never rating. Table 26 indicates two interesting reversals from what would be expected. First, those persons categorized as having a high preservation orientation cited less environmental damage criteria than the high use respondents for three of the five motorized activities (trail biking, snowmobiling, and four-wheeling). Second, for the same activities, the high use respondents used the park enjoyment criteria less than their preservation oriented counterparts.

Table 26. The relationship between park orientation and appropriateness criteria used for the "never" appropriate rating by activity (visitors).*

| Park orientation | Appropriateness criteria | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Environmental damage | Administrative problems | Safety aspects | Personal dislike | Park enjoyment | |
| **Trail biking (N=101)** | | | | | | |
| High preservation (N=25) | 19 (44.2) | 3 (7.0) | 1 (2.3) | - | 20 (46.5) | 43 (100.0) |
| Medium preservation (N=6) | 4 (28.6) | - | - | 1 (7.1) | 9 (64.3) | 14 (100.0) |
| Balanced (N=39) | 32 (40.0) | 3 (3.8) | 2 (2.5) | 4 (5.0) | 39 (48.8) | 80 (100.0) |
| Medium use (N=8) | 7 (36.8) | 1 (5.3) | - | 1 (5.3) | 10 (52.6) | 19 (100.0) |
| High use (N=23) | 22 (55.0) | 2 (5.0) | 4 (10.0) | 4 (10.0) | 8 (20.0) | 40 (100.0) |
| | 84 (42.9) | 9 (4.6) | 7 (3.6) | 10 (5.1) | 86 (43.9) | 196 (100.0) |
| **Snowmobiling (N=84)** | | | | | | |
| High preservation (N=18) | 17 (51.5) | 2 (6.1) | 1 (3.0) | - | 13 (39.4) | 33 (100.0) |
| Medium preservation (N=8) | 2 (14.3) | 1 (7.1) | 2 (14.3) | 1 (7.1) | 8 (57.1) | 14 (100.0) |
| Balanced (N=35) | 30 (44.8) | 4 (6.0) | - | 5 (7.5) | 28 (41.8) | 67 (100.0) |
| Medium use (N=6) | 6 (46.2) | - | - | 2 (15.4) | 5 (38.5) | 13 (100.0) |
| High use (N=16) | 15 (55.6) | 3 (11.1) | - | - | 9 (33.3) | 27 (100.0) |
| | 70 (45.5) | 10 (6.5) | 3 (1.9) | 8 (5.2) | 63 (40.9) | 154 (100.0) |
| **Water skiing (N=78)** | | | | | | |
| High preservation (N=20) | 13 (36.1) | - | - | - | 23 (63.9) | 36 (100.0) |
| Medium preservation (N=9) | 2 (14.3) | - | 1 (7.1) | - | 11 (78.6) | 14 (100.0) |
| Balance (N=33) | 17 (26.2) | - | 2 (3.1) | 8 (12.3) | 38 (58.5) | 65 (100.0) |
| Medium use (N=3) | 3 (33.3) | - | - | - | 6 (66.7) | 9 (100.0) |
| High use (N=13) | 4 (21.1) | - | 3 (15.8) | 1 (5.3) | 11 (57.9) | 19 (100.0) |
| | 39 (27.3) | - | 6 (4.2) | 9 (6.3) | 89 (62.2) | 143 (100.0) |
| **Nude bathing (N=71)** | | | | | | |
| High preservation (N=14) | - | - | - | 6 (37.5) | 10 (62.5) | 16 (100.0) |
| Medium preservation (N=4) | - | - | - | 1 (25.0) | 3 (75.0) | 4 (100.0) |
| Balanced (N=23) | 1 (4.0) | - | - | 9 (36.0) | 17 (60.0) | 25 (100.0) |

Table 26. Continued.

| Park orientation | Appropriateness criteria | | | | | |
|---|---|---|---|---|---|---|
| | Environmental damage | Administrative problems | Safety aspects | Personal dislike | Park enjoyment | |
| **Nude bathing (con't)** | | | | | | |
| Medium use (N=5) | - | - | - | 1 (16.7) | 5 (83.3) | 6 (100.0) |
| High use (N=22) | - | 1 (4.3) | - | 15 (65.2) | 7 (30.4) | 23 (100.0) |
| | 1 (1.4) | 1 (1.4) | - | 32 (43.2) | 40 (54.1) | 74 (100.0) |
| **Power boating (N=69)** | | | | | | |
| High preservation (N=18) | 13 (38.2) | - | 1 (2.9) | - | 20 (58.8) | 34 (100.0) |
| Medium preservation (N=7) | 2 (20.0) | - | 1 (10.0) | - | 7 (70.0) | 10 (100.0) |
| Balanced (N=31) | 16 (26.2) | - | 3 (4.9) | 6 (9.8) | 36 (59.0) | 61 (100.0) |
| Medium use (N=2) | 3 (50.0) | - | - | - | 3 (50.0) | 6 (100.0) |
| High use N=11) | 4 (25.0) | - | 1 (6.3) | 1 (6.3) | 10 (62.5) | 16 (100.0) |
| | 38 (29.9) | - | 6 (4.7) | 7 (5.5) | 76 (59.8) | 127 (100.0) |
| **Four-wheeling (N=68)** | | | | | | |
| High preservation (N=13) | 13 (56.5) | 1 (4.3) | 1 (4.3) | - | 8 (34.8) | 23 (100.0) |
| Medium preservation (N=6) | 5. (55.6) | - | 1 (11.1) | - | 3 (33.3) | 9 (100.0) |
| Balanced (N=25) | 23 (46.0) | 3 (6.0) | - | 2 (4.0) | 22 (44.0) | 50 (100.0) |
| Medium use N=6) | 7 (58.3) | - | - | 2 (16.7) | 3 (25.0) | 12 (100.0) |
| High use (N=17) | 17 (65.4) | 3 (11.5) | 1 (3.8) | 1 (3.8) | 4 (15.4) | 26 (100.0) |
| | 65 (54.2) | 7 (5.8) | 3 (2.5) | 5 (4.2) | 40 (33.3) | 120 (100.0) |
| **Hang gliding (N=60)** | | | | | | |
| High preservation (N=16) | 1 (4.2) | 3 (12.5) | 7 (29.2) | 1 (4.2) | 12 (50.0) | 24 (100.0) |
| Medium preservation (N=6) | - | - | 2 (25.0) | - | 6 (75.0) | 8 (100.0) |
| Balanced (N=21) | - | 4 (14.3) | 9 (32.1) | - | 15 (53.6) | 28 (100.0) |
| Medium use (N=3) | - | 2 (33.3) | 1 (16.7) | - | 3 (50.0) | 6 (100.0) |
| High use (N=12) | - | 1 (5.6) | 9 (50.0) | 1 (5.6) | 7 (38.9) | 18 (100.0) |
| | 1 (1.2) | 10 (11.9) | 28 (33.3) | 2 (2.4) | 43 (51.2) | 84 (100.0) |

*The frequencies represent responses and the percentages are based on row totals.

The balanced orientation, the largest group of respondents, offers some useful insights into how the motorized activities are perceived. For that group, water skiing, power boating and trail biking were primarily judged according to their noise level and potential conflicts with the other users (see Table 24). For snowmobiling and four-wheeling, they were more evenly divided between environmental damage and park enjoyment.

Nude bathing was evaluated almost exclusively against two criteria: personal dislike and park enjoyment. Table 26 indicates that the majority favored the second criterion by at least a two to one margin. A look at Table 24 reveals that the major component expressed in this criterion is conflicts with other users. Only the high use respondents cited the personal dislike criterion more often. Likely, this deviation is spurious since there is no logical connection between park orientation and personal morality.

The high use respondents also appeared to differ slightly in their evaluation of hang gliding. They tended to be more skeptical of safety than the other users. Apparently, their definition of appropriate use does not include activities which are potentially dangerous.

As for the two intermediate orientations, medium use and medium preservation, the small sample sizes warrant caution since any differences could be due to chance alone. Hence, the discussion was limited to the other three orientations. Unfortunately, even here, some problems with few responses exist.

The Depends rating. Very minor differences occurred between the same activities rated as never and depends (Table 27). In fact, for the motorized activities, the same deviations from the expected were repeated: high preservation respondents were more concerned about the park experience than preservation and the high use respondents listed more restrictions based on preservation than the park experience. For hang gliding, safety aspects became more important, regardless of orientation. In other words, if it was to be allowed, there had to be safety restrictions (on pilot proficiency, equipment, and areas). Safety also increased in importance for snowmobiling, water skiing, and power boating. For nude bathing, the high use respondents aligned themselves with the others in emphasizing park enjoyment concerns over personal concerns. Given the larger sample size (45 for depends as opposed to 23 for never), it would appear that the previous relationship between high use and nude bathing was indeed spurious.

Two slight variations occurred in the balanced category. Snowmobiling received slightly fewer restrictions for environmental damage and more to do with the park enjoyment, while trail biking became more evenly split between the same two criteria.

## Conclusions

Certainly, the three major reversals in both the never and depends ratings were not anticipated. Given the potentially damaging aspects of trail biking, snowmobiling, and four-wheeling, it is surprising that the high preservation respondents listed proportionately fewer environmental damage criteria than did the high use respondents. Furthermore,

Table 27. The relationship between park orientation and appropriateness criteria used for the "depends" appropriate rating by activity (visitors).*

| Park orientation | Appropriateness criteria | | | | | |
|---|---|---|---|---|---|---|
| | Environmental damage | Administrative problems | Safety aspects | Personal concerns | Park enjoyment concerns | |
| **Trail biking** (N=90) | | | | | | |
| High preservation (N=16) | 10 (35.7) | - | 1 (3.6) | - | 17 (60.7) | 28 (100.0) |
| Medium preservation (N=10) | 10 (50.0) | - | 1 (5.0) | - | 9 (45.0) | 20 (100.0) |
| Balanced (N=31) | 27 (50.9) | - | 2 (3.8) | - | 24 (45.3) | 53 (100.0) |
| Medium use (N=6) | 7 (63.6) | - | - | - | 4 (36.4) | 11 (100.0) |
| High use (N=26) | 20 (47.6) | - | 5 (11.9) | - | 17 (40.5) | 42 (100.0) |
| | 74 (48.1) | - | 9 (5.8) | - | 71 (46.1) | 154 (100.0) |
| **Snowmobiling** (N=111) | | | | | | |
| High preservation (N=20) | 8 (24.2) | - | - | - | 25 (75.8) | 33 (100.0) |
| Medium preservation (N=11) | 8 (33.3) | - | 3 | - | 13 (66.7) | 24 (100.0) |
| Balanced (N=34) | 24 (40.0) | 1 (1.7) | 4 (6.7) | - | 31 (51.7) | 60 (100.0) |
| Medium use (N=8) | 7 (46.7) | - | - | - | 8 (53.3) | 15 (100.0) |
| High use (N=36) | 19 (34.5) | - | 14 (25.5) | - | 22 (40.0) | 55 (100.0) |
| | 66 (35.3) | 1 (0.5) | 21 (11.2) | - | 99 (52.9) | 187 (100.0) |
| **Water skiing** (N=120) | | | | | | |
| High preservation (N=20) | 7 (18.9) | - | 4 (10.8) | - | 26 (70.3) | 37 (100.0) |
| Medium preservation (N=10) | 1 (5.3) | - | 4 (21.1) | - | 14 (73.7) | 19 (100.0) |
| Balanced (N=36) | 8 (11.4) | 1 (1.4) | 10 (14.3) | - | 51 (72.9) | 70 (100.0) |
| Medium use (N=11) | 1 (4.0) | - | 4 (16.0) | - | 20 (80.0) | 25 (100.0) |
| High use (N=41) | 10 (16.1) | - | 8 (12.9) | - | 44 (71.0) | 62 (100.0) |
| | 27 (12.7) | 1 (0.5) | 30 (14.1) | - | 155 (72.8) | 213 (100.0) |
| **Nude bathing** (N=111) | | | | | | |
| High preservation (N=23) | - | - | - | 9 (26.5) | 25 (73.5) | 34 (100.0) |
| Medium preservation (N=11) | - | - | - | 2 (10.0) | 18 (90.0) | 20 (100.0) |
| Balanced (N=37) | 1 (1.5) | - | - | 6 (9.0) | 60 (89.5) | 67 (100.0) |

Table 27. Continued.

| Park orientation | Appropriateness criteria | | | | | |
|---|---|---|---|---|---|---|
| | Environmental damage | Administrative problems | Safety aspects | Personal concerns | Park enjoyment concerns | |
| **Nude bathing (con't)** | | | | | | |
| Medium use (N≈8) | - | - | - | 2 (14.3) | 12 (85.7) | 14 (100.0) |
| High use (N≈30) | 1 (2.2) | - | - | 11 (24.4) | 33 (73.3) | 45 (100.0) |
| | 2 (1.1) | - | - | 30 (16.7) | 148 (82.2) | 180 (100.0) |
| **Power boating (N=129)** | | | | | | |
| High preservation (N=22) | 9 (22.0) | - | 3 (7.3) | - | 29 (70.7) | 41 (100.0) |
| Medium preservation (N=12) | 4 (16.7) | - | 4 (16.7) | - | 16 (66.7) | 24 (100.0) |
| Balanced (N=38) | 9 (11.8) | 1 (1.3) | 9 (11.8) | - | 57 (75.0) | 76 (100.0) |
| Medium use (N=13) | 1 (3.2) | - | 3 (9.7) | - | 27 (87.1) | 31 (100.0) |
| High use (N=44) | 16 (23.2) | - | 6 (8.7) | - | 47 (68.1) | 69 (100.0) |
| | 39 (16.2) | 1 (0.4) | 25 (10.4) | - | 176 (73.0) | 241 (100.0) |
| **Four-wheeling (N=123)** | | | | | | |
| High preservation (N=26) | 24 (60.0) | - | - | - | 16 (40.0) | 40 (100.0) |
| Medium preservation (N=13) | 14 (70.0) | - | 3 (15.0) | - | 3 (15.0) | 20 (100.0) |
| Balanced (N=41) | 37 (64.9) | - | - | - | 20 (35.1) | 57 (100.0) |
| Medium use (N=8) | 7 (77.8) | - | - | - | 2 (22.2) | 9 (100.0) |
| High use (N=33) | 29 (63.0) | - | 2 (4.3) | - | 15 (32.6) | 46 (100.0) |
| | 111 (64.5) | - | 5 (2.9) | - | 56 (32.6) | 172 (100.0) |
| **Hang gliding (N=122)** | | | | | | |
| High preservation (N=19) | 1 (3.6) | - | 17 (60.7) | - | 10 (35.7) | 28 (100.0) |
| Medium preservation (N=10) | 3 (21.4) | - | 7 (50.0) | - | 4 (28.6) | 14 (100.0) |
| Balanced (N=44) | 6 (10.0) | 4 (6.7) | 26 (43.3) | - | 24 (40.0) | 60 (100.0) |
| Medium use (N=9) | 1 (7.7) | - | 7 (53.8) | - | 5 (38.5) | 13 (100.0) |
| High use (N=38) | 1 (2.1) | 3 (6.4) | 34 (72.3) | - | 9 (19.1) | 47 (100.0) |
| | 12 (7.4) | 7 (4.3) | 91 (56.2) | - | 52 (32.1) | 162 (100.0) |

* The frequencies represent responses and the percentages are based on row totals.

the reverse was true for the park enjoyment concerns. Exactly why water skiing and power boating were not included in these reversals is difficult to answer. It may be that their confinement to lakes appears to concentrate their impacts on both the environment and park enjoyment.

There are, however, several possible explanations for these surprising results. (1) The logic behind the construction of the park orientation scale may have been faulty. In other words, the proportion of responses may be a poor indicator of one's actual orientation. Given the vague responses which made up the scale, that is entirely possible. (2) There may be no connection between one's generalized orientation and the specific criteria used to judge recreational use. This explanation is given further credence by the fact that the activities were rated and discussed before respondents were asked about the purpose of the National Parks. One would expect that after talking about the impacts of recreational use, respondents would give detailed definitions of park purposes. However, their definitions were extremely general. (3) The assumption that visitors can be dichotomized based on use and preservation may be incorrect. For instance, the results seem to indicate that the so-called high use respondents also thought about preservation; and that the preservationists were concerned with more than just preservation. (4) Jacob (1978) proposes another explanation for part of this reversal. He found that preservationists tended to use rigid stereotypes in their evaluation of recreational use--a stereotype that emphasized user behavior since environmental

impacts were already assumed. Use oriented individuals, on the other hand, were more tolerant of other users, therefore, their major concerns were with any potential damage to the area they were using. (5) Finally, the percentages may not be representative of all park visitors due to some of the small sample sizes encountered for the park orientation variable.

## Park Orientation/Appropriateness of a Particular Activity

### Overview

Whereas the previous relationship dealt with park orientation and appropriateness criteria, the present one will focus on how a person's park orientation influences his judgement of particular activities. Since both variables are single response variables, statistical analysis is possible. As mentioned, Chi-square and gamma have been selected as the test of significance and measure of association, respectively.

Based on Jacob's (1978) assumption that use oriented individuals are more tolerant of other activities, the more use oriented someone is the less likely he should rate an activity as never appropriate.

### Results

According to the results (Table 28), the relationship being tested was significant for only two activities: water skiing and power boating. Furthermore, the gammas in these two instances showed a moderately strong association in the direction specified above. The relationship for two other activities (snowmobiling and hang gliding),

Table 28.  The relationship between park orientation and appropriateness of a particular activity (visitors).*

| Park orientation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| **Trail biking** | | | |
| High preservation | 16 | 25 | 41 |
| | (39.0) | (61.0) | (100.0) |
| Medium preservation | 11 | 6 | 17 |
| | (64.7) | (35.3) | (100.0) |
| Balanced | 31 | 39 | 70 |
| | (44.3) | (55.7) | (100.0) |
| Medium use | 6 | 8 | 14 |
| | (42.9) | (57.1) | (100.0) |
| High use | 26 | 23 | 49 |
| | (53.1) | (46.9) | (100.0) |
| $x^2$ = 4.21 | | | |
| Significance - NS | 90 | 101 | 191 |
| Gamma = -.09 | (47.1) | (52.9) | (100.0) |
| **Snowmobiling** | | | |
| High preservation | 20 | 18 | 38 |
| | (52.6) | (47.4) | (100.0) |
| Medium preservation | 11 | 8 | 19 |
| | (57.9) | (42.1) | (100.0 |
| Balanced | 34 | 35 | 69 |
| | (49.3) | (50.7) | (100.0) |
| Medium use | 8 | 6 | 14 |
| | (57.1) | (42.9) | (100.0) |
| High use | 38 | 16 | 54 |
| | (70.4) | (29.6) | (100.0) |
| $x^2$ = 5.92 | | | |
| Significance = NS | 111 | 83 | 194 |
| Gamma = -.19 | (57.2) | (42.8) | (100.0) |

Table 28.   Continued.

| Park orientation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| **Water skiing** | | | |
| High preservation | 20 | 20 | 40 |
| | (50.0) | (50.0) | (100.0) |
| Medium preservation | 11 | 9 | 20 |
| | (55.0) | (45.0) | (100.0) |
| Balanced | 36 | 33 | 69 |
| | (52.2) | (47.8) | (100.0) |
| Medium use | 12 | 3 | 15 |
| | (80.0) | (20.0) | (100.0) |
| High use | 41 | 13 | 54 |
| | (75.9) | (24.1) | (100.0) |
| $x^2$ = 11.87 | | | |
| Significance = .018 | 120 | 78 | 198 |
| Gamma = -.32 | (60.6) | (39.4) | (100.0) |
| **Nude bathing** | | | |
| High preservation | 23 | 14 | 37 |
| | (62.2) | (37.8) | (100.0) |
| Medium preservation | 11 | 4 | 15 |
| | (73.3) | (26.7) | (100.0) |
| Balanced | 37 | 25 | 62 |
| | (59.7) | (40.3) | (100.0) |
| Medium use | 8 | 6 | 14 |
| | (57.1) | (42.9) | (100.0) |
| High use | 31 | 22 | 53 |
| | (58.5) | (41.5) | (100.0) |
| $x^2$ = 1.24 | | | |
| Significance = NS | 110 | 71 | 181 |
| Gamma = .07 | (60.8) | (39.2) | (100.0) |

Table 28. Continued.

| Park orientation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| **Power boating** | | | |
| High preservation | 22 | 18 | 40 |
| | (55.0) | (45.0) | (100.0) |
| Medium preservation | 12 | 7 | 19 |
| | (63.2) | (36.8) | (100.0) |
| Balanced | 38 | 31 | 69 |
| | (55.1) | (44.9) | (100.0) |
| Medium use | 13 | 2 | 15 |
| | (86.7) | (13.3) | (100.0) |
| High use | 44 | 11 | 55 |
| | (80.0) | (20.0) | (100.0) |
| $x^2$ = 13.3 | | | |
| Significance = .009 | 129 | 69 | 198 |
| Gamma = -.32 | (65.2) | (34.8) | (100.0) |
| **Four-wheeling** | | | |
| High preservation | 26 | 13 | 39 |
| | (66.7) | (33.3) | (100.0) |
| Medium preservation | 13 | 6 | 19 |
| | (68.4) | (31.6) | (100.0) |
| Balanced | 41 | 25 | 66 |
| | (62.1) | (37.9) | (100.0) |
| Medium use | 8 | 6 | 14 |
| | (57.1) | (42.9) | (100.0) |
| High use | 35 | 17 | 52 |
| | (67.3) | (32.7) | (100.0) |
| $x^2$ = .87 | | | |
| Significance = NS | 123 | 67 | 190 |
| Gamma = .01 | (64.7) | (35.3) | (100.0) |

Table 28.   Continued.

| Park orientation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| Hang gliding | | | |
| High preservation | 20 | 16 | 36 |
| | (55.6) | (44.4) | (100.0) |
| Medium preservation | 10 | 6 | 16 |
| | (62.5) | (37.5) | (100.0) |
| Balanced | 44 | 21 | 65 |
| | (67.7) | (32.3) | (100.0) |
| Medium use | 9 | 3 | 12 |
| | (75.0) | (25.0) | (100.0) |
| High use | 39 | 13 | 52 |
| | (75.0) | (25.0) | (100.0) |
| $x^2$ = 4.16 | | | |
| Significance = NS | 122 | 59 | 181 |
| Gamma = -.23 | (67.4) | (32.6) | (100.0) |

* Frequencies represent respondents and percentages are based on row totals.

though insignificant, showed a similar direction. In fact, for all the activities, except nude bathing, the high use respondents were more tolerant than those categorized as high preservation.

## Conclusions

Statistically, park orientation failed to distinguish respondents in five of the seven activities. Therefore, it appears that decisions regarding the appropriateness of recreational use are not based on some abstract definition of park purpose. Of course, the same reservations listed for the previous relationship may also be true.

## Desired Experience/Appropriateness Criteria

### Overview

Instead of concentrating on a visitor's conceptual orientation towards the parks, the following section will examine the relationship between his expectations for a National Park experience and his choice of criteria for judging recreational use. Since recreational use can directly impact one's experience, this relationship should provide a more personal and detailed look at what recreationists want and do not want while they are visiting a park.

The major categories of the desired experience variable are the same as those found in Table 21, "Reasons for visiting a National Park." Therefore, both variables in the relationship are multiple response variables which precludes any statistical testing and necessitates a qualitative discussion based on responses.

The figures in Tables 29 and 30 represent clusters of responses. By comparing these clusters, one can analyze the relationship and look for inter-activity differences. To compensate for the lack of a statistical test for significance, only large differences will be considered indicative of a trend.

## Results

*The Never rating.* The most striking finding from Table 29 is the uniform choice of criteria regardless of desired experience. In other words, it appears that although people may come to a National Park seeking different experiences they will judge an activity against similar criteria. Of course, the multiple response format may also account for this lack of variation since a single individual could desire several different experiences and still use the same criteria.

Some noticeable variation, however, did occur. (Others are apparent but arise from too few responses for any meaningful analysis. This . olds for nearly all the clusters in hang gliding.) For those who desired good campgrounds, trails, security, etc. (facilities/management practices), trail biking interfered more with their park enjoyment, while power boating and water skiing were felt to be more environmentally damaging. Snowmobiling showed the greatest variation under the desire for escape with environmental damage again being a major factor.

*The Depends rating.* As with the never rating, little variation appears between the desired experiences (Table 30). In fact, the only differences worth mentioning occurred for trail biking under the

Table 29.  The relationship between desired experience and appropriate-
ness criteria used for the never appropriate rating by
activity.*

| Appropriateness criteria | Desired experience | | | | | | |
|---|---|---|---|---|---|---|---|
| | Facilities/ management practices | Recreation: active and passive | Relationships with nature | Learning/ discovery | Escape physical and mental pressures | Other | |
| **Trail biking (N=101)** | | | | | | | |
| Environmental damage | 26 (42.6) | 12 (48.0) | 75 (41.2) | 8 (40.0) | 27 (50.9) | 3 (37.5) | 151 (43.3) |
| Administrative problems | - | 2 (8.0) | 9 (4.9) | 2 (10.0) | 4 (7.5) | - | 17 (4.9) |
| Safety aspects | 2 (3.3) | 1 (4.0) | 6 (3.3) | 1 (5.0) | - | - | 10 (2.9) |
| Personal dislike | - | 1 (4.0) | 10 (5.4) | 2 (10.0) | 1 (1.9) | 1 (12.5) | 15 (4.3) |
| Park enjoyment | 33 (54.1) | 9 (36.0) | 82 (45.1) | 7 (35.0) | 21 (39.6) | 4 (50.0) | 156 (44.7) |
| | 61 (100.0) | 25 (100.0) | 182 (100.0) | 20 (100.0) | 53 (100.0) | 8 (100.0) | 349 (100.0) |
| **Snowmobiling (N=84)** | | | | | | | |
| Environmental damage | 24 (40.7) | 11 (57.9) | 62 (44.0) | 7 (50.0) | 25 (58.1) | 3 (37.5) | 132 (46.5) |
| Administrative problems | 2 (3.4) | 3 (15.9) | 9 (6.4) | - | 4 (9.3) | - | 18 (6.3) |
| Safety aspects | - | - | 4 (2.8) | - | - | - | 4 (1.4) |
| Personal dislike | 9 (15.3) | - | 9 (6.4) | - | - | - | 18 (6.3) |
| Park enjoyment | 24 (40.7) | 5 (26.3) | 57 (40.4) | 7 (50.0) | 14 (32.6) | 5 (62.5) | 112 (39.4) |
| | 59 (100.0) | 19 (100.0) | 141 (100.0) | 14 (100.0) | 43 (100.0) | 8 (100.0) | 284 (100.0) |
| **Water skiing (N=78)** | | | | | | | |
| Environmental damage | 14 (36.8) | 2 (15.4) | 34 (25.4) | 4 (26.7) | 12 (28.6) | 1 (11.1) | 67 (26.7) |
| Administrative problems | - | - | - | - | - | - | - |
| Safety aspects | 2 (5.3) | 1 (7.7) | 5 (3.7) | - | 1 (2.4) | 2 (22.2) | 11 (4.4) |
| Personal dislike | 4 (10.5) | - | 6 (4.5) | 2 (13.3) | - | - | 12 (4.8) |
| Park enjoyment | 18 (47.4) | 10 (76.9) | 89 (66.4) | 9 (60.0) | 29 (69.0) | 6 (66.7) | 161 (64.1) |
| | 38 (100.0) | 13 (100.0) | 134 (100.0) | 15 (100.0) | 42 (100.0) | 9 (100.0) | 251 (100.0) |
| **Nude bathing (N=71)** | | | | | | | |
| Environmental damage | - | - | 1 (1.5) | - | - | - | 1 (0.8) |
| Administrative problems | - | - | 2 (2.9) | - | - | 1 (12.5) | 3 (2.3) |
| Safety aspects | - | - | - | - | - | - | - |
| Personal dislike | 11 (45.8) | 2 (28.6) | 29 (42.6) | 4 (50.0) | 6 (42.9) | 3 (37.5) | 55 (42.6) |
| Park enjoyment | 13 (54.2) | 5 (71.4) | 36 (52.9) | 4 (50.0) | 8 (57.1) | 4 (50.0) | 70 (54.3) |
| | 24 (100.0) | 7 (100.0) | 68 (100.0) | 8 (100.0) | 14 (100.0) | 8 (100.0) | 129 (100.0) |

Table 29. Continued.

| Appropriateness criteria | Facilities/management practices | Recreation: active and passive | Relationships with nature | Learning/discovery | Escape physical and mental pressures | Other | |
|---|---|---|---|---|---|---|---|
| **Power boating (N=69)** | | | | | | | |
| Environmental damage | 13 (36.1) | 3 (25.0) | 32 (26.0) | 3 (30.0) | 13 (32.5) | - | 64 (28.4) |
| Administrative problems | - | - | - | - | - | - | - |
| Safety aspects | 1 (2.8) | 1 (8.3) | 7 (5.7) | - | 1 (2.5) | - | 10 (4.4) |
| Personal dislike | 4 (11.1) | - | 6 (4.9) | - | - | - | 10 (4.4) |
| Park enjoyment | 18 (50.0) | 8 (66.7) | 78 (63.4) | 7 (70.0) | 26 (65.0) | 4 (100.0) | 141 (62.7) |
| | 36 (100.0) | 12 (100.0) | 123 (100.0) | 10 (100.0) | 40 (100.0) | 4 (100.0) | 225 (100.0) |
| **Four-wheeling (N=68)** | | | | | | | |
| Environmental damage | 27 (50.9) | 10 (76.9) | ·54 (50.9) | 5 (62.5) | 19 (59.4) | 6 (50.0) | 121 (54.0) |
| Administrative problems | 2 (3.8) | 2 (15.4) | 6 (5.7) | - | 5 (15.6) | - | 15 (6.7) |
| Safety aspects | 1 (1.9) | - | 4 (3.8) | - | - | - | 2 (2.2) |
| Personal dislike | 3 (5.7) | - | 5 (4.7) | - | - | - | 9 (3.6) |
| Park enjoyment | 20 (37.7) | 1 (7.7) | 37 (34.9) | 3 (37.5) | 9 (25.0) | 6 (50.0) | 75 (33.5) |
| | 53 (100.0) | 13 (100.0) | 106 (100.0) | 8 (100.0) | 32 (100.0) | 12 (100.0) | 224 (100.0) |
| **Hang gliding (N=60)** | | | | | | | |
| Environmental damage | - | 1 (14.3) | 1 (1.2) | - | 1 (5.0) | - | 3 (2.1) |
| Administrative problems | 4 (26.7) | - | 11 (13.6) | - | - | 2 (18.2) | 17 (12.0) |
| Safety aspects | 1 (6.7) | 2 (28.6) | 26 (32.1) | 3 (37.5) | 8 (40.0) | 4 (3b.4) | 44 (31.0) |
| Personal dislike | - | - | 1 (1.2) | 1 (12.5) | 1 (5.0) | 1 (9.1) | 4 (2.8) |
| Park enjoyment | 10 (66.7) | 4 (57.1) | 42 (51.9) | 4 (50.0) | 10 (50.0) | 4 (36.4) | 74 (52.1) |
| | 15 (100.0) | 7 (100.0) | 81 (100.0) | 8 (100.0) | 20 (100.0) | 11 (100.0) | 142 (100.0) |

* The frequencies represent responses and percentages are based on column totals.

Table 30. The relationship between desired experience and appropriateness criteria used for the depends appropriate rating by activity.*

| Appropriateness criteria | Facilities/ management practices | Recreation: active and passive | Relationships with nature | Learning/ discovery | Escape physical and mental pressures | Other | |
|---|---|---|---|---|---|---|---|
| **Trail biking (N=90)** | | | | | | | |
| Environmental damage | 21 (38.9) | 7 (63.6) | 67 (49.3) | 8 (61.5) | 13 (39.4) | 5 (33.3) | 121 (46.2) |
| Administrative problems | - | - | - | - | - | - | - |
| Safety aspects | 2 (3.7) | - | 10 (7.4) | 2 (15.4) | 2 (6.1) | - | 16 (6.1) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 31 (57.4) | 4 (36.4) | 59 (43.4) | 3 (23.1) | 18 (54.5) | 10 (66.7) | 125 (47.7) |
| | 54 (100.0) | 11 (100.0) | 136 (100.0) | 13 (100.0) | 33 (100.0) | 15 (100.0) | 262 (100.0) |
| **Snowmobiling (N=111)** | | | | | | | |
| Environmental damage | 19 (40.4) | 6 (35.3) | 53 (30.3) | 10 (55.6) | 13 (26.0) | 4 (25.0) | 105 (32.5) |
| Administrative problems | 1 (2.1) | - | 1 (0.6) | - | - | - | 2 (0.6) |
| Safety aspects | 2 (4.3) | 2 (11.8) | 21 (12.0) | 1 (5.6) | 7 (14.0) | 3 (18.8) | 36 (11.1) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 25 (53.2) | 9 (52.9) | 100 (57.1) | 7 (38.9) | 30 (60.0) | 9 (56.2) | 180 (55.7) |
| | 47 (100.0) | 17 (100.0) | 175 (100.0) | 18 (100.0) | 50 (100.0) | 16 (100.0) | 323 (100.0) |
| **Water skiing (N=120)** | | | | | | | |
| Environmental damage | 15 (20.0) | 2 (6.7) | 24 (12.4) | 2 (11.8) | 3 (7.1) | 2 (11.8) | 48 (12.8) |
| Administrative problems | 1 (1.3) | - | - | 1 (5.9) | - | - | 2 (0.5) |
| Safety aspects | 11 (14.7) | 4 (13.3) | 32 (16.5) | 2 (11.8) | 6 (14.3) | 1 (5.9) | 56 (14.9) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 48 (64.0) | 24 (80.0) | 138 (71.1) | 12 (70.6) | 33 (78.6) | 14 (82.3) | 269 (71.7) |
| | 75 (100.0) | 30 (100.0) | 194 (100.0) | 17 (100.0) | 42 (100.0) | 17 (100.0) | 375 (100.0) |
| **Nude bathing (N=111)** | | | | | | | |
| Environmental damage | 1 (1.7) | - | 2 (1.2) | - | 2 (4.3) | - | 5 (1.6) |
| Administrative problems | - | - | - | - | - | - | - |
| Safety aspects | - | - | - | - | - | - | - |
| Personal concerns | 5 (8.6) | 3 (16.7) | 30 (18.3) | 4 (25.0) | 5 (10.9) | 2 (33.3) | 49 (15.9) |
| Park enjoyment concerns | 52 (89.7) | 15 (83.3) | 132 (80.5) | 12 (75.0) | 39 (84.8) | 4 (66.7) | 254 (82.5) |
| | 58 (100.0) | 18 (100.0) | 164 (100.0) | 16 (100.0) | 46 (100.0) | 6 (100.0) | 308 (100.0) |

Table 30. Continued.

| Appropriateness criteria | Desired experience | | | | | | |
|---|---|---|---|---|---|---|---|
| | Facilities/ management practices | Recreation: active and passive | Relationships with nature | Learning/ discovery | Escape physical and mental pressures | Other | |
| **Power boating** (N=129) | | | | | | | |
| Environmental damage | 19 (24.1) | 4 (12.1) | 35 (16.4) | 2 (8.3) | 8 (13.6) | 5 (22.7) | 73 (17.0) |
| Administrative problems | 1 (1.3) | - | - | 1 (4.2) | - | - | 2 (0.5) |
| Safety aspects | 8 (10.1) | 4 (12.1) | 28 (13.1) | 1 (4.2) | 7 (11.9) | 1 (4.5) | 49 (11.4) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 51 (64.6) | 25 (75.8) | 150 (70.4) | 20 (83.3) | 44 (74.6) | 16 (72.7) | 306 (71.2) |
| | 79 (100.0) | 33 (100.0) | 213 (100.0) | 24 (100.0) | 59 (100.0) | 22 (100.0) | 430 (100.0) |
| **Four-wheeling** (N=123) | | | | | | | |
| Environmental damage | 22 (59.5) | 10 (66.7) | 95 (61.3) | 14 (77.8) | 27 (55.1) | 8 (57.1) | 176 (61.1) |
| Administrative problems | - | - | - | - | - | - | - |
| Safety aspects | 2 (5.4) | - | 5 (3.2) | - | 2 (4.1) | - | 9 (3.1) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 13 (35.1) | 5 (33.3) | 55 (35.5) | 4 (22.2) | 20 (40.8) | 6 (42.9) | 103 (35.8) |
| | 37 (100.0) | 15 (100.0) | 155 (100.0) | 18 (100.0) | 49 (100.0) | 14 (100.0) | 288 (100.0) |
| **Hang gliding** (N=122) | | | | | | | |
| Environmental damage | 8 (13.1) | 1 (5.9) | 12 (8.9) | - | 4 (8.3) | - | 25 (8.7) |
| Administrative problems | 2 (3.3) | 1 (5.9) | 9 (6.7) | - | - | - | 12 (4.2) |
| Safety aspects | 35 (57.4) | 12 (70.6) | 64 (47.4) | 8 (61.5) | 29 (60.4) | 8 (61.5) | 156 (54.4) |
| Personal concerns | - | - | - | - | - | - | - |
| Park enjoyment concerns | 16 (26.2) | 3 (17.6) | 50 (37.0) | 5 (38.5) | 15 (31.3) | 5 (38.5) | 94 (32.8) |
| | 61 (100.0) | 17 (100.0) | 135 (100.0) | 13 (100.0) | 48 (100.0) | 13 (100.0) | 287 (100.0) |

* The frequencies represent responses and percentages are based on column totals.

facilities/management practices category. Here, those desiring that
experience appeared to be more concerned that trail biking would inter-
fere with their enjoyment of the park.

## Conclusions

Two explanations are offered for the seeming lack of variation.
First, there may be little connection between why a person visits a
National Park and how he judges the appropriateness of recreational use.
Second, if there was a connection, the instrument may have been too
general to capture it.

### Desired Experience/Appropriateness of
### a Particular Activity

## Overview

This section will deal directly with the kinds of experiences that
ᵢre associated with a particular activity rating and any differences
between activities. In other words, do certain activities tend to
interfere more with certain desired experiences? Again, the analysis
is qualitative.

## Results

From Table 31, it appears that regardless of how respondents rated
an activity, they desired the same mix of experiences. Furthermore,
with the exception of hang gliding, the inter-activity differences
were minimal. Apparently, hang gliding so interfered with those respondents
who desired to interact with nature, that it was rated inappropriate

Table 31. The relationship between desired experience and appropriateness of a particular activity.*

| Appropriateness of a particular activity | Facilities/ management practices | Recreation: active and passive | Relationships with nature | Learning/ discovery | Escape physical and mental pressures | Other reasons | |
|---|---|---|---|---|---|---|---|
| **Trail biking** | | | | | | | |
| Depends (N=90) | 28 (18.7) | 7 (4.7) | 76 (50.7) | 9 (6.0) | 23 (15.3) | 7 (4.7) | 150 (100.0) |
| Never (N=101) | 29 (16.3) | 15 (8.4) | 91 (51.1) | 11 (6.2) | 27 (15.2) | 5 (2.8) | 178 (100.0) |
| **Snowmobiling** | | | | | | | |
| Depends (N=111) | 30 (16.3) | 10 (5.4) | 96 (52.2) | 11 (6.0) | 28 (15.2) | 9 (4.9) | 184 (100.0) |
| Never (N=84) | 27 (18.2) | 11 (7.4) | 72 (48.6) | 9 (6.1) | 26 (17.6) | 3 (2.0) | 148 (100.0) |
| **Waterskiing** | | | | | | | |
| Depends (N=120) | 42 (20.2) | 15 (7.2) | 102 (49.0) | 10 (4.8) | 30 (14.4) | 9 (4.3) | 208 (100.0) |
| Never (N=78) | 17 (12.8) | 7 (5.3) | 72 (54.1) | 9 (6.8) | 24 (18.1) | 4 (3.0) | 133 (100.0) |
| **Nude bathing** | | | | | | | |
| Depends (N=111) | 31 (16.6) | 12 (6.4) | 102 (54.5) | 11 (5.9) | 27 (14.4) | 4 (2.1) | 187 (100.0) |
| Never (N=71) | 23 (18.5) | 7 (5.6) | 64 (51.6) | 7 (5.6) | 15 (12.1) | 8 (6.5) | 124 (100.0) |
| **Power boating** | | | | | | | |
| Depends (N=129) | 43 (19.4) | 16 (7.2) | 109 (49.1) | 12 (5.4) | 31 (14.0) | 11 (5.0) | 222 (100.0) |
| Never (N=69) | 17 (14.3) | 6 (5.0) | 64 (53.8) | 7 (5.9) | 23 (19.3) | 2 (1.7) | 119 (100.0) |
| **Four-wheeling** | | | | | | | |
| Depends (N=123) | 29 (14.2) | 12 (5.9) | 108 (52.9) | 14 (6.9) | 33 (16.2) | 8 (3.9) | 204 (100.0) |
| Never (N=68) | 25 (20.3) | 9 (7.3) | 58 (47.2) | 6 (4.9) | 19 (15.4) | 6 (4.9) | 123 (100.0) |
| **Hang gliding** | | | | | | | |
| Depends (N=122) | 46 (21.0) | 12 (5.5) | 99 (45.2) | 12 (5.5) | 41 (18.7) | 9 (4.1) | 219 (100.0) |
| Never (N=60) | 10 (10.3) | 6 (6.2) | 57 (58.7) | 6 (6.2) | 12 (12.4) | 6 (6.2) | 97 (100.0) |
| **Total Responses** | 61 (17.1%) | 22 (6.2%) | 184 (51.7%) | 20 (5.6%) | 54 (15.2%) | 15 (4.2%) | 356 (100.0%) |

* Frequencies represent responses and percentages are based on row totals.

more often.  Given the criteria used to rate hang gliding (Table 24),
its visibility appears to be the critical factor.

## Conclusions

Similar to park orientation, desired experience fails to predict
how a respondent will rate an activity.  Intuitively, that is sur-
prising.  Since desired experience was designed to represent a  more
personal view of the parks, one would expect greater differences.
However, as with the previous relationship, the responses to the desired
experience question (Is there a particular reason why you go to a National
Park?) may have been too vague to establish a relationship to activity
appropriateness.  Alternatively, respondents may not conceptually link
their desired experiences with their activity ratings.

### Appropriateness of a Particular Activity/ Activity Participation

#### Overview

To determine whether participation in the activity being rated
influenced respondent evaluations, this relationship was examined
for each activity using Chi-square as the test for significance and
gamma as the measure for strength of association.

#### Results

Table 32 indicates that participation did indeed exert a powerful
influence on the respondents' evaluations of appropriateness.  For five
of the seven activities, the relationship was significant and gamma
was moderate to very strong.  Apparently, the less someone participates,
the more likely he will rate an activity as never appropriate in the

Table 32.   The relationship between activity participation and
            appropriateness rating).*

| Participation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| **Trail biking** | | | |
| Frequently | 6 | 4 | 10 |
| | (60.0) | (40.0) | (100.0) |
| Sometimes | 10 | 3 | 13 |
| | (76.9) | (23.1) | (100.0) |
| Seldom | 15 | 11 | 26 |
| | (57.7) | (42.3) | (100.0) |
| Never | 59 | 83 | 143 |
| | (41.3) | (58.7) | (100.0 |
| $x^2$ = 8.44 | | | |
| Significance = .038 | 90 | 101 | 192 |
| Gamma = -.40 | (46.9) | (53.1) | (100.0) |
| **Snowmobiling** | | | |
| Frequently | 6 | 1 | 7 |
| | (85.7) | (14.3) | (100.0) |
| Sometimes | 5 | 1 | 6 |
| | (83.3) | (16.7) | (100.0) |
| Seldom | 12 | 2 | 14 |
| | (85.7) | (14.3) | (100.0) |
| Never | 88 | 80 | 168 |
| | (52.4) | (47.6) | (100.0) |
| $x^2$ = 10.22 | | | |
| Significance = .017 | 111 | 84 | 195 |
| Gamma = -.66 | (56.9) | (43.1) | (100.0) |
| **Water skiing** | | | |
| Frequently | 13 | 4 | 17 |
| | (76.5) | (23.5) | (100.0) |
| Sometimes | 28 | 5 | 33 |
| | (84.8) | (15.2) | (100.0) |
| Seldom | 32 | 23 | 55 |
| | (58.2) | (41.8) | (100.0) |
| Never | 47 | 47 | 94 |
| | (50.0 | (50.0) | (100.0) |
| $x^2$ = 14.43 | | | |
| Significance = .002 | 120 | 79 | 199 |
| Gamma = -.40 | (60.3) | (39.7) | (100.0) |

Table 32 . Continued.

| Participation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| **Nude bathing** | | | |
| Frequently | 11 | 0 | 11 |
| | (100.0) | (0.0) | (100.0) |
| Sometimes | 13 | 0 | 13 |
| | (100.0) | (0.0) | (100.0) |
| Seldom | 23 | 0 | 23 |
| | (100.0) | (0.0) | (100.0) |
| Never | 64 | 71 | 135 |
| | (47.4) | (52.6) | (100.0) |
| $x^2$ = 40.153 | | | |
| Signficance = .000 | 111 | 71 | 182 |
| Gamma = -1.00 | (61.0) | (39.0) | (100.0) |
| | | | |
| **Power boating** | | | |
| Frequently | 16 | 4 | 20 |
| | (80.0) | (20.0) | (100.0) |
| Sometimes | 26 | 6 | 32 |
| | (81.2) | (18.8) | (100.0) |
| Seldom | 40 | 16 | 56 |
| | (71.4) | (28.6) | (100.0) |
| Never | 47 | 43 | 90 |
| | (52.2) | (47.8) | (100.0) |
| $x^2$ = 13.19 | | | |
| Significance = .004 | 129 | 69 | 198 |
| Gamma = -.43 | (65.2) | (34.8) | (100.0) |
| | | | |
| **Four-wheeling** | | | |
| Frequently | 9 | 2 | 11 |
| | (81.8) | (18.2) | (100.0) |
| Sometimes | 26 | 11 | 37 |
| | (70.3) | (29.7) | (100.0) |
| Seldom | 23 | 7 | 30 |
| | (76.7) | (23.3) | (100.0) |
| Never | 65 | 48 | 113 |
| | (57.5) | (42.5) | (100.0) |
| $x^2$ = 6.31 | | | |
| Significance = NS | 123 | 68 | 191 |
| Gamma = -.31 | (64.4) | (35.6) | (100.0) |

Table 32 . Continued.

| Participation | Appropriateness rating | | |
|---|---|---|---|
| | Depends | Never | |
| Hang gliding | | | |
| Frequently | 0 | 0 | 0 |
| | (0.0) | (0.0) | (100.0) |
| Sometimes | 1 | 1 | 2 |
| | (50.0) | (50.0) | (100.0) |
| Seldom | 4 | 0 | 4 |
| | (100.0) | (0.0) | (100.0) |
| Never | 117 | 59 | 176 |
| | (66.5) | (33.5) | (100.0) |
| $x^2$ = 2.25 | | | |
| Significance = NS | 122 | 60 | 182 |
| Gamma = -.42 | (67.0) | (33.0) | (100.0) |

* Frequencies represent respondents and percentages are based on
  row totals.

parks. Conversely, the more often someone participates, the more likely he will approve of the activity with certain restrictions.

It should be noted that in the case of hang gliding it is impossible to make a decision concerning the above relationship because of problems with the expected cell frequencies. So few respondents had participated in hang gliding that six of the eight cells had expected frequencies less than five, which violates the guidelines for reliable Chi-square analysis.

## Conclusions

While it is difficult to state that participation in an activity is the most important variable influencing a respondent's evaluation of appropriateness (since statistical analysis was impossible for most of the other relationships), it certainly appears to be a critical factor.[1] In fact, compared to "park orientation," it appears to be more important.

At first glance, this relationship seems to be self-evident. Yet, given the special status of National Parks, one might expect decisions concerning the appropriateness of activities would be relatively free of personal biases. The fact that they weren't reveals that visitors may have more pragmatic perceptions of park purposes.

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[1]Intuitively, activity participation should be the independent variable. However, since the Chi-square statistic does not indicate direction, the reverse may also be true. In other words, evaluation of appropriateness may influence degree of participation.

CHAPTER VIII

MANAGERS AND THE ACTIVITY APPROPRIATENESS MODEL

## Introduction

Because the desired experience and activity participation variables were not measured for managers, only three of the proposed relationships in the model are available for analysis. Furthermore, the extremely small sample size of only 12 managers necessitates that all analysis be qualitative.

Each of the three relationships will be discussed below.

## Appropriateness Criteria/Appropriateness of a Particular Activity

### Overview

Although managers rated the same seven activities as the most inappropriate or appropriate with restrictions (Table 18), their criteria for rating the appropriateness of recreational use should be more precise than the visitors' due to their intimate contact with the parks.

### Results

The Never rating. As expected, managers were more detailed in their evaluation of the seven activities. For the land based, motorized activities (trail biking, four-wheeling, and snowmobiling), such concerns as damage to the native population, erosion, and administrative control problems were mentioned in addition to non-specific

damage, conflicts with others, and fumes, dust, noise. Six of the seven managers who totally objected to water skiing felt it would interfere with the mood of the parks. Lastly, conflicts with other users was the primary reason given for banning nude bathing; and visual intrusion for hang gliding.

The Depends rating. The restriction most often mentioned by managers regardless of activity was spatial zoning (certain areas, trails, or parks). They cited this criterion to minimize environmental damage and conflicts with other users. Some managers also said that four-wheeling, trail biking, and power boating should be allowed only for access into parks and not as a recreational activity. Power boating was mentioned specifically in this regard. Boats with motors were acceptable if limited to small horsepower engines and used for access; but not for pulling water skiiers. Thus, while 11 of the 12 managers didn't completely ban power boating (whereas seven banned water skiing), the same 11 put rigid restrictions on the use of power boats.

The main restriction on nude bathing was again certain areas where it wouldn't offend others. Finally, hang gliding was appropriate if regulated for safety and limited to special areas where its visual impact would be minimal.

## Conclusions

Although the National Park Service has a nontraditional use statement that gives general guidelines for regulating such use, it is the responsibility of the individual manager to interpret that statement. Judging from their comments concerning the reasons for their activity ratings, it appears that those interviewed were able to

translate these general guidelines into rather specific criteria. Furthermore, except for one manager, their criteria appeared to transcend personal biases.

The tendency for managers to use more defined criteria than visitors does not mean they were against the seven problematic activities per se. In fact, according to Table 18, the majority were willing to accommodate most of the activities as long as they met the certain conditions. Only trail biking and water skiing were totally rejected by more than half the managers.

## Park Orientation/Appropriateness Criteria

### Overview

The identical five-point, park orientation scale that categorized visitors was used for managers. The distribution for managers is as follows: high preservation (none), medium preservation (5), balanced (4), medium use (2), and high use (1). The manager sample, therefore, was slightly skewed towards preservation although no manager was classified as high preservation. Given the twin missions of the National Park Service (preservation and public enjoyment) with the long term emphasis on preservation, these results were predictable. Managers also enjoy almost continuous contact with National Parks. In light of Tuan's previous comments (Chapter II), it is not surprising that managers would lean towards preserving the resource on which they live and work.

The following results will show how this park orientation relates to the specific criteria used to judge activity appropriateness.

However, since 9 of the 12 managers were either medium preservation or balanced, few differences are expected between the two variables.

## Results

The Never rating.  As predicted, there was no discernable variation among their park orientations.  In fact, since water skiing, power boating, hang gliding, and nude bathing were all judged according to park enjoyment criteria (conflicts with others, mood of the parks, visual intrusion, noise, etc.), there was no possibility of variation. For the remaining activities, all orientations were evenly split between environmental damage and park enjoyment.

The Depends rating.  In contrast to the visitors, managers with a preservation orientation were more concerned with environmental damage for trail biking, four-wheeling, and snowmobiling, while those with a balanced or use orientation wanted restrictions to ensure that the parks were enjoyed by everyone.  Conversely, power boating, water skiing, and nude bathing generated restrictions that related to minimizing conflicts with other users and the mood of the parks regard- less of orientation.  Lastly, there were no differences between orien- tation and criteria used to restrict hang gliding.  All managers cited safety restrictions and certain areas to prevent potential conflicts.

## Conclusions

Although the results cannot be construed as representative of all National Park managers, the present sample did tend to use environmen- tal criteria when they had a preservation orientation and park enjoyment criteria when they had a balanced or use orientation--a trend in

the predicted direction. Perhaps, the managers' intimate contact with

the parks can explain this tendency. Those classified as preser-

vationists had ample opportunity to view the physical impacts of users,

traditional or not. Alternatively, those more concerned with the

park experience were in the position to see the day-to-day conflicts

between users and the effect of over use on the parks.

## Park Orientation/Appropriateness
## of a Particular Activity

### Overview

As with visitors, this relationship will examine whether a manager's

*park orientation influences his rating of a particular activity.* In

other words, is there something about an activity or recreation in

general which conflicts with a specific kind of park orientation?

Few differences are expected between orientations because of the

majority of managers had similar perceptions about the purpose of the

National Parks.

### Results

For two activities, trail biking and four-wheeling, the managers

with a medium preservation orientation tended towards using restrictions

whereas those with a balanced orientation favored a total ban. In

all other cases, they agreed, as expected.

### Conclusions

It is impossible to generalize from these results. Yet, it could

be that the managers with a preservation orientation felt they could

restrict four-wheeling and trail biking in such a way as to minimize environmental damage, whereas the more use oriented managers may have felt that conflicts with other users were harder to control. The close agreement on the other activities could be explained by the managers' familiarity with recreational use. Having greater access to information about activities (either through past experience or through inter-agency communications), it seems likely they would reach the same conclusions regardless of their own orientation.

# CHAPTER IX

## CONCLUSIONS AND RECOMMENDATIONS

### Introduction

This chapter will consist of a summary of the important findings;
the conclusions that can be drawn from the study; the limitations
inherent in the methodology; and the recommendations to management
and for future research.

### Summary of Major Findings

The following results are considered the most important findings
in terms of the study objectives.

1.  In general, visitors were middle-class families who made
relatively frequent trips to the National Parks.  However, those
trips consisted of short visits to several parks per trip.

2.  The majority of managers had over 15 years experience with
National Park Service in a variety of units and regions.

3.  Of a list of 22 activities, seven were rated by visitors and
managers as problematic:  trail biking, water skiing, snowmobiling,
nude bathing, power boating, four-wheeling, and hang gliding.  However,
none were totally rejected by a majority of visitors.  The same held
for managers, except for trail biking and water skiing.

4.  The criteria most often mentioned as justification for these
activity ratings were environmental damage; conflicts with other uses;
fumes, dust, noise; pollution; personal morality; and safety.

5.  Based on the direct perception questions, visitor perceptions of the National Parks were extremely general.  The most often mentioned park purposes included non-specific preservation, public enjoyment, preservation of natural beauty and recreation.  The most important reasons given for visiting a National Park were to see the scenery, to have nature experiences, and to use the campgrounds, trails, etc.

6.  The criteria selected to rate an activity (see above) were better indicators (though still somewhat vague) of visitors' images of the parks.  Managers, on the other hand, used criteria that reflected more defined perceptions as a result of day-to-day contact.

7.  There appeared to be no connection between the park orientation or desired experience and the criteria used to rate an activity or the appropriateness of an activity.

8.  The relationship between a visitor's participation in the activity being rated and appropriateness of that activity was statistically significant for five of the seven activities.

## Conclusions

This section will deal with the important conclusions concerning nontraditional use and park perceptions.

1.  From the findings listed above, it appears that visitors and managers are able to distinguish nontraditional activities from the historical uses of National Parks.  This ability to categorize activities, however, was in no way a general condemnation of the nontraditional recreation.  In fact, even though they were ranked above the others in inappropriateness, the seven activities which constituted the focus

of this study were approved by the majority of visitors as a use of the parks; in some cases without reservations, and in other cases with certain restrictions.

2. It seems unlikely that visitors relate to National Parks as "places" in the sense defined by Tuan (1977). In other words, few visitors either expressed a strong emotional attachment for the parks or used wording which would indicate a precise knowledge of these resources. Given the typical park visit (just long enough to see the major features, take a few pictures and move on to the next vacation spot), these findings were predictable. However, there is an alternative explanation--one that is a function of the questions used to capture the concept of place. This limitation of the methodology will be discussed below.

3. Lee's (1972) assumption that people have a more pragmatic view of places was partially corroborated by the criteria employed to rate the seven activities. Frequently, visitors expressed a concern over use that might conflict with either the enjoyment or the enjoyment of others. Apparently, they wanted recreational use to conform to certain standards, thus eliminating any uncertainty about appropriate behavior. In Lee's words, by banning certain activities and restricting others, they would in effect reduce "the number and intensity of socially problematic elements" and establish a place where "normative constraints" could be taken for granted.

However, since the criteria used to evaluate the seven problematic activities were fairly general, it appears that the majority of visitors

relied heavily on images of activities and the subsequent behavior of its participants rather than on actual information. That assumption is given further weight by the tendency of those who had never participated in an activity to rate it as inappropriate.

## Limitations

Because of the lack of research on either nontraditional use or visitor/manager perceptions of the National Parks, the study was largely exploratory in nature. For the same reason, an interview was selected in order to capture the greatest variety of possible responses. However, the exact wording of the interview questions (particularly those dealing with park perceptions) may have resulted in the generalized responses. In other words, if you ask a general question, you run the risk of receiving a general answer.

Permitting multiple responses without any designation as to their relative importance also precluded a statistical analysis of nearly all the results. Coupled with the small sample sizes and response rates, it is difficult to make a definitive statement about the sample of visitors.

Lastly, since visitors were interviewed in National Parks limited to Utah, and were mostly from California or the western states, there may be some regional differences inherent in the data.

## Recommendations

### Management

Based on current trends, it is likely that increasing numbers of visitors with more diverse expectations will be attracted to the parks. Therefore, it is imperative that managers stay abreast of and, if possible, anticipate the future directions of this trend if "crisis management" is to be avoided.

Several sources of information should be sought early in any management plans associated with nontraditional use, including visitor inputs--the focus of this study. According to Lime and Stankey (1971:28) "knowing who may oppose a given management action and taking measures to explain why their preferences cannot be met may be as important as deciding for whom the area will be managed." Considering the growing popularity of special interests groups with their politically adept lobbyists, managers would do well to become more involved with public opinion and to be wary of reverting to personal biases.

### Future research

The present study briefly addressed the issue on nontraditional use and National Park perceptions; yet by touching on a few key concepts, it opened the way for future research. For instance, park perceptions should be researched in more detail to determine whether the findings of the present study were an artifact of the methodology or, in fact, an accurate portrayal of visitors' images and feelings. Nontraditional users themselves need to be questioned concerning their

rationales for selecting National Parks.  Finally, studies similar
to the present one but covering a greater diversity of visitors and
managers would increase the representativeness of the findings for
both populations.

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APPENDICES

# Appendix A

## Research Instrument

Date _____ NP Unit _____ Number _____ Where _____

1. Kindly indicate your feelings on the appropriateness of each of the following activities in the National Parks by circling the corresponding number.

2. Please circle the number that reflects how often you participate in each activity, either inside or outside the National Parks.

| | Appropriateness | | | | Participation | | | |
|---|---|---|---|---|---|---|---|---|
| | Always Appropriate | Depends | Never Appropriate | | Frequently | Sometimes | Seldom | Never |
| Hiking | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Swimming | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Canoeing or Kayaking | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Snowmobiling | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Picnicking | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Technical Rock Climbing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Four Wheeling | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |

| | Always Appropriate | Depends | Never Appropriate | | Frequently | Sometimes | Seldom | Never |
|---|---|---|---|---|---|---|---|---|
| Backpacking | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Cross-country Skiing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Hang Gliding | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Sail Boating | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Cave Exploring | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Downhill Skiing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Camping (accessible by auto) | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Power Boating | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Trail Biking | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Fishing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Water Skiing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |

| | Always Appropriate | Depends | Never Appropriate | | Frequently | Sometimes | Seldom | Never |
|---|---|---|---|---|---|---|---|---|
| Jogging | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Scuba Diving | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Bicycling | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |
| Nude Bathing | 1 | 2 | 3 | | 1 | 2 | 3 | 4 |

Comments:

## Visitor Interview

DATE:                NUMBER:              NP UNIT:              WHERE:

I.  In your own terms, what do you feel is the purpose of the National Parks?

II.  Is there a particular reason why you go to a National Park?

III.  How many National Parks (not NRA's, Historic Sites, Battlefields, or state parks) have you visited in the last three years _____

Were these on different trips?      Yes      No

If so, how many trips? _____

What was your average length of stay at each Park?_ _____

IV.  Background:

Sex:  Male      Female

Age:  _____

Occupation:  Position_____    Type of Company _____

Residence:  _____

Upbringing:  Rural      Small Town      Small City      Large City

Size of Group:  _____

Type of Group:  Family____   Friends____   Club or Organization ____
                Group unacquainted prior to trip____

Do you belong to any clubs, organizations, or associations that are involved with outdoor areas or activities?  Yes      No

Do any other members of your family?      Yes      No

## Appendix B

### Manager Interview

Date_____ NP Unit _____ Name _____

   I.  Purpose of the study

  II.  Evaluation of activities

III.  Definition of a National Park

      A.  In your own terms, what do you feel is the purpose of the National Parks?

IV.  Background Information

      A.  Education: Degrees _____ Major emphasis _____

      B.  Upbringing: Rural   Small town   Small city   Large city

  V.  Park Service Background

      A.  How long have you been with the Park Service? _____

      B.  Have you had any other job experience that you think is relevant to your current job?  Yes  No  If so, what was it? _____

      C.  What Park Service units have you been involved with?

## Appendix C

### Verbal Directions on Rating Activities

When rating the following activities, please consider only the natural areas of the National Park System--not National Recreation Areas, Historic Sites, Battlefields, or parks administered by any other federal or state agency.  Also, your answer should reflect your feelings in general beyond this particular Park, in other words, whether you feel that that activity belongs in any National Park. If any of the activities are unfamiliar to you, please do not hesitate to ask for a description.  Are there any questions?

# Appendix D

## Description of the Park Purpose Categories

The following will outline examples of the specific visitor comments as they were categorized for the park purpose questions.

### Preservation (non-specific)

"Parks should be left as they are."
"An area that should be untouched."
"Parks should exist to preserve what God gave us."
"Parks should be free from man-made influence.  In other words, left natural."

### Preservation (future generations)

"Parks should be preserved so my grandchildren will be able to see them as they are today."
"Parks should be set aside for all generations, not just ours."

### Preservation (unique scenery)

"Parks exist to protect our best scenic wonders."
"Parks are for the preservation of special attractions such as arches, geysers, caves, etc."

### Preservation (wilderness)

"Parks should preserve what is left of our dwindling wilderness."

### Preservation (beauty)

"Parks are for the preservation of such natural beauty as this."
"To protect all this beautiful scenery."

### Preservation (wildlife)

"Parks should be sanctuaries for wildlife."
"Parks are for the protection of certain native species."

## Preservation (science)

"Parks should preserve natural environments for scientific
observation."
"Parks are important because they allow scientists to study
nature before it is corrupted by man."

## Enjoyment

"Parks are for people to see and enjoy."
"Parks exist for public enjoyment."
"Parks should be accessible so that everyone can see and enjoy
these specific places of interest."

## Education

"Parks should provide visitors with information and programs
about nature, wildlife, geology, etc."
"Parks should teach visitors about the environment and about
man's place in it."

## Recreation

"Parks are for people to hike and camp in, etc."
"Parks are for recreation."

## Introspection

"Parks are one of the few places people can go to get away from
it all."
"Parks offer people, especially those in the cities, a respite from
the daily hassles of life."

## Relaxation

"Parks should be quiet, peaceful places where people can go to
relax."

## Resourcefulness

"Parks provide people with a place where they can do things for
themselves.

## Health

"Parks are valuable for their clean air and water."

## Appendix E

## Description of Desired Experience Categories

This appendix will outline how the visitors' responses to the "desired experience" question were coded. Because of the idea of desired experience is conceptually similar to B. L. Driver's (1976) psychological outcomes, his Recreation Experience Preference (REP) scales were used.

The letters in parentheses correspond to Driver's designations for his preference domains and indicate where these domains have been combined to form the major categories. For example, the category Other encompasses Driver's "Family Togetherness" (domain E), "Meeting-Observing New People" (domain G), and "Introspection" (domain J). Furthermore, the individual categories under the major headings represent the scales that clustered under Driver's domains.

Although Driver used this schema to categorize the psychological outcomes that individuals seek from their participation in recreational activities, it was felt that many of the outcomes could also be associated with recreational places (e.g., National Parks). Therefore, the visitor responses were compared to the outcomes in Driver's scales and were coded according to where they clustered. The following are examples of the actual visitor comments as they were categorized for the desired experience question.

Facilities:

Physical Resources -

"Because of the nice trails."
"The campgrounds are laid out nice."

### Management Practices -

"I like the clean restrooms."
"The slideshows and evening programs are well done."
"National Parks are the best because they're not overly
    commercial like the KOA's, etc."
"I don't have to worry about security in the parks because
    the rangers are always patrolling."
"Because I know what I'm getting into, like McDonald's."

### Accessibility -

"One reason I like National Parks is because they're easy
    to get to."

### Personnel -

"The rangers are helpful and friendly."

## Recreation:

### Active

"I go to National Parks to hike the backcountry."
"I like to snowmobile in the winter in the northern parks and
    fourwheel in the summer in the canyon parks."
"Parks have some of the best climbing in the U.S."

### Passive

"Good fishing."
"Our family likes to camp in the parks."

## Relationships With Nature:   (Domain I)

### Scenery -

"To see and enjoy the scenery."
"To look at the spectacular features."
"To view the scenic wonders."

### General Nature Experience -

"To be with nature."
"Because I love everything about nature."
"Because I enjoy being outdoors."

Learn About Nature -

"To learn about the different habits of the animals."
"To check out how the different features were formed."


Learning-Discovery:  (Domain H)

Exploration

"To see what the parks have to offer."
"Because I like to visit new places."


Escape Physical and Mental Pressures:  (Domains N, O, P)

Daily Routine -

"To get away from my daily routine."
"Because they offer something different from what I see and
do every day."

Physical Stressors -

"To get away from the stress and hassles of the city like
pollution, noise, crowds, etc."

Physical Rest -

"To take it easy."
"To relax."

Tranquility -

"Because it's so quiet and peaceful here."
"Because parks are mellow places to hang out."

Privacy

"To get away from other people."
"Because I like the privacy I can get in the backcountry."


Other:  (Domains E, G, J)

Introspection

"A place where I can go to think about my place in the
scheme of things.

## Family Togetherness -

"To show my kids the beauty of this country."
"To be with my family."

## Meeting New People -

"To be with other people like myself."
"Because there are so many friendly people in the parks."

## Appendix F

## Appropriateness Criteria

The following sections will outline examples of the specific remarks made by respondents as an explanation for their activity ratings. The first section will be for the Never rating and the second for the Depends rating.

### The Never Rating

Environmental Damage:

    Non specific -
        "Because it causes environmental damage."
    Pollution -
        "Because it pollutes the water."
    Wildlife -
        "Because it scares the wildlife."
        "Because it damages the native populations."
    Erosion -
        "Because it acclerates erosion."
    Facilities -
        "Because it would require the construction of facilities which
            would tear up the environment."

Administrative Problems:

    Rescue costs -
        "Because it would necessitate periodic rescues which are
            costly and dangerous to the rescue team."
    Control -
        "Because it is too difficult to control."
    Operations costs -
        "Because the necessary trails and facilities are too expen-
            sive to put in and maintain."

Safety Aspects:

    Safety of spectators -
        "Because it might injure other people."
    Safety of participants
        "Because it is too dangerous for those doing it."

Personal Dislike:

Dislike activity -
"Because I just don't like it."
"Because it offends me."
Dislike participants -
"Because those who do it have no respect for others."
Fumes, dust, noise -
"Because it is too noisy for any natural environment."

Park Enjoyment:

Mood of National Parks -
"Because it interferes with the mood of the parks."
Conflicts with others -
"Because it is bound to cause trouble with other people."
Too commercial -
"Because it would turn the parks into something like Disney
World."
Congestion -
"Because it would attract too many visitors, adding to the
already crowded conditions."
Lack appreciation -
"Because it has nothing to do with appreciating the parks."
Visual intrusion -
"Because it's visibility would detract from the naturalness
of the surroundings."
Fumes, dust, noise -
"Because it is too noisy."

*The Depends Rating*

Environmental Damage:

No damage (non-specific) -
"If it doesn't cause any damage."
No pollution -
"If it's pollution can be controlled."
No wildlife damage -
"If it can be determined that it doesn't scare the wildlife."
No facilities -
"As long as it doesn't require the construction of facilities
that would damage the environment."
Certain trails -
"If it can be confined to certain trails to prevent damage."
Certain areas -
"If it can be put in an area where it won't damage the environ-
ment."

Certain parks -
    "If it could be restricted to certain parks where the environ-
        ment can handle it."
For access only -
    "If it is used only for access to remote areas, not as
        recreation per se."

## Administrative Problems:

Spectator safety -
    "If the safety of others is assured."
Skill and equipment requirements -
    "If the Park Service makes sure that those who want to do it
        have experience and good equipment."
Safe areas -
    "If there are areas where the conditions are safe."
Direct supervision -
    "If the Park Service supplies guides so no one gets hurt,
        especially for novices."

## Personal Concerns:

Restricted areas -
    "If it is restricted to certain areas so my family and I know
        where it is and won't go there."
Remote areas -
    "If it is only allowed in remote areas where I'm not likely
        to see it."

## Park Enjoyment:

No conflicts -
    "If it doesn't conflict with others."
Controls on numbers -
    "If the Park Service puts a limit on the number of people
        doing it."
Controls on commercialism -
    "As long as it doesn't get too commercial."
Controls on fumes, dust, and noise -
    "If they could limit the size of engines to control the noise."
Controls on litter -
    "If the litter could be picked up."
Certain areas or trails -
    "If it could be limited to certain areas separate from other
        visitors."
Certain parks -
    "If it's limited to certain parks--in other words, I don't
        want to see it in every park."
Remote areas -
    "If it's restricted to remote areas where most visitors won't
        run into it."

## Appendix G

## Park Orientation Scale

| Park Orientation | Response* | | |
|---|---|---|---|
| | #1 | #2 | #3 |
| | P | P | P |
| High Preservation | P | P | - |
| | P | - | - |
| Medium Preservation | P | P | U |
| Balanced | P | U | |
| Medium Use | P | U | U |
| | U | U | U |
| High Use | U | U | - |
| | U | - | - |

\*  P = preservation

U = use