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# **Methodology in Outdoor Recreation Research I: Interventions**

## UNIQUE PROGRAMMING: AN EXAMINATION OF THE BENEFITS OF A FREE CHOICE PROGRAM

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**Abstract:** This study was an investigation of a free choice program and the benefits free choice yields on the developing characteristics of self-esteem and intrinsic motivation among adolescent girls. Both quantitative and qualitative data were collected at Brown Ledge Camp, an all girls summer camp outside of Burlington, Vermont, during the summer of 2000. Quantitative results indicate that intrinsic motivation increases over the course of the free choice program. The qualitative data appears to support the literature that both intrinsic motivation and self-esteem increase when participants are given the freedom to make their own recreation participation decisions.

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### Introduction

Adolescence has been identified as a time of dramatic developmental change (Henderson, 1995; Larson, 2000; Marcia, Waterston, Matteson, Archer, & Orlofsky, 1993; Shaw & Kemeny, 1989; Shaw, Kleiber, & Caldwell, 1995). During this time, social ideals are impressed upon adolescents through families, friends, peers, teachers, government and media, to name just a few. Young girls in particular are faced with issues tied to femininity as well as their role in society (Eskes, Duncan, & Miller, 1998; Kane, 1990; Wearing, 1992). Such overwhelming and bewildering pressures often result in low levels of self-esteem.

One approach proven to be effective in increasing levels of self-esteem among young women is leisure engagement (Diener, Emmons, & Larsen, 1986; Shaw et al., 1995). More specifically, the free choice, self-direction and intrinsically motivated behavior associated with selecting leisure activities may significantly enhance self-esteem and opportunities for self-expression (Larson, 2000).

### Self-esteem and Intrinsic Motivation

Diener et al. (1986) contended that people's personalities develop and are expressed in leisure experiences; that personality expression is at its best in an unrestricted

situation that allows for freedom of choice. Hence, highly structured leisure programs (e.g., many summer camps and extra-curricular school activities) that rely heavily on external motivating factors such as public recognition and awards do little to foster the development of intrinsic behavior (Deci & Ryan, 1991). Young people who are given the opportunity to participate in activities in which they are intrinsically motivated may lead to many other positive developmental benefits. For example, Larson (2000) suggested that intrinsically motivated participation, high involvement and concentration in activities encourages the development of initiative, thus leading to creativity, leadership and altruism in addition to many other elements of positive development. Additionally, Eskes, Duncan, and Miller (1998) found that young women who have high levels of intrinsic motivation may have enhanced levels of self-esteem and feel a sense of empowerment.

While intrinsic motivation has proven to be important to the successful development of adolescents, so too has freedom of choice. The notion of freedom of choice is not new to leisure research, and has been identified as a fundamental element in a leisure experience (Datillo, 1999; Mannell & Kleiber, 1997; Mannell, Zuzanek, & Larson, 1988; Samdahl, 1986). That is, in order for an experience to be considered true leisure, it must to some degree be freely chosen, free of constraints, free from social roles, freely self-determined, etc. Ellis and Witt (1984) posited that freedom of choice in leisure consists of four major elements: 1) perceived competence, 2) perceived control, 3) intrinsic motivation, and 4) playfulness. Moreover, Mannell et al. (1988) contended that perceived freedom, intrinsic motivation and self-expression are closely linked. If a person lacks the freedom to choose an activity, then their intrinsic needs will not be met, and they will have difficulty expressing themselves and their personality.

Individuals have different interpretations and definitions of what freedom is and how it exists in a leisure experience. This may be due, at least in part, to the fact that freedom has been examined as a state of mind, therefore making it difficult to operationalize and measure (Hemingway, 1996). Freedom as a program structure rather than as a state of mind is truly unique and yields a rich field of as yet untapped data.

### Purpose of the Study

The primary purpose of this exploratory study was to examine the benefits of a free choice recreation program and the extent to which free choice increases intrinsic interest and motivation to participate among adolescent girls. This study purpose was based on the theory that when individuals are given the freedom to choose their recreation activities, their motivation for participation will either be, or overtime become, intrinsic and that participants will benefit from increased self-esteem and possibly other positive developmental outcomes. Two exploratory questions guided the study: 1) do young women experience increased levels of self-esteem over the course of a free choice program? and 2) do young women experience increased levels of intrinsic motivation over the course of a free choice program?

## Methods

### Sampling Site

The site for this study was Brown Ledge Camp, an all girls camp located just outside of Burlington, Vermont on Lake Champlain. Known as the "different camp," Brown Ledge offers an unrestricted (i.e., free choice) program schedule in which activity selection and duration of participation is entirely elective for the campers. Campers are free to decide in which activity to participate in at any time on little more than a moments notice during activity hours. Staff members are hired as counselors in a specific activity and are available at all times during activity hours to receive campers.

Brown Ledge is an eight-week camp. Campers can enroll at Brown Ledge for their choice of three sessions: 1) July, 2) August, and 3) full season. The July and August sessions are each four-weeks long, while the full season, as the name implies, is the entire eight-weeks. Of the 130 campers, approximately half stay for the full season each year. Full season campers tend to be older than four-week session campers, and also tend to have more years experience at Brown Ledge.

Brown Ledge was founded in 1926 by Harry E. Brown (H.E.B.). In implementing the unique philosophy at Brown Ledge, H.E.B. established three fundamental ideas that fostered the free choice program: 1) "Play-life" is considered to be one of the most important factors in the development of personality, 2) Brown Ledge Camp deliberately chooses a wide range of sports or "play" activities to use as means to an end, and 3) these "play" activities are used as vehicles by which to arrive at health, poise, self-confidence – in a phrase, increased personal power.

### Selection of Subjects

Brown Ledge campers range in age from eight to eighteen, and come from several countries around the world. Subjects for this study were young women enrolled at Brown Ledge during the summer of 2000, aged 12 through 18, and residents of the United States. These delimitations were established so as to better facilitate understanding of the questionnaire and communication during the interview process.

### Collection of Data

Because the benefits of freedom have traditionally been difficult to operationalize, both quantitative and qualitative methods were used to measure the benefits of the free choice program. The quantitative element was meant to address the original issues of self-esteem and intrinsic motivation and to provide baseline data, while the qualitative element was meant to add depth and richness to developments that may or may not have contributed to self-esteem and intrinsic motivation over the course of the summer. That is, the qualitative data may either challenge

or reinforce quantitative statistics resulting from the quantitative data.

The study was conducted in three phases: 1) a self administered questionnaire was mailed to the subjects approximately three weeks prior to their arrival at camp, 2) during the summer, those who agreed to complete the questionnaire were asked to participate in the qualitative aspect of the study, and 3) a second self-administered questionnaire was mailed to the subjects approximately three weeks after their departure from camp. The first phase of the study, or "pre-camp questionnaire", was meant to measure levels of self-esteem and intrinsic motivation prior to experiencing the free choice program. The third phase, or "post-camp questionnaire", was meant to measure levels of self-esteem and intrinsic motivation after experiencing the free choice program. During analysis, the two phases could be compared and analyzed accordingly. Third phase surveys were mailed not only to subjects who had responded during the first phase of the study, but also to all subjects in order to encourage a high response rate.

### Quantitative Data Collection

Both the pre- and post-camp questionnaires consisted of three sections. Section one consisted of The Rosenberg Self-Esteem Scale (RSE) designed to measure self-esteem in adolescents. Section two consisted of the Weissinger and Bandalos Intrinsic Motivation Scale, designed to measure self-determination, competence, commitment, and challenge among participants in recreation activities. In section three, subjects were asked a series of questions about their background such as age and number of years they have spent at camp, whether or not they have sisters or friends from home at camp, and how they heard about camp.

Approximately 49% (n=92) pre-camp questionnaires were returned, 31% (n=52) post-camp questionnaires were returned, and 16% (n=29) returned both. Subjects ranged in age from 12 through 17 with a mean age of 14 years. The mean number of years spent at Brown Ledge ranged from 0 through 8, with a mean number of years of 2.7.

### Qualitative Data Collection

Subjects volunteered to participate in the interview process early in the camp season. A total of 25 individuals volunteered; 9 full season campers, 10 full season, 1<sup>st</sup> year Junior Counselors (JC's), 4 July session campers, and 2 August session campers. Interviewees ranged in age from 12 through 17. Interviews did not impinge upon nor conflict with camp activities. Interviewing was therefore limited to only a few hours a day. To simplify the logistics of setting up interview times with all 25 interviewees, five focus groups and two one-on-one interviews were established. Two of the groups consisted only of full session campers (i.e., one 5-person focus group, and one 4-person focus group), one consisted only of full season 1<sup>st</sup> year JC's (i.e., 8-person focus group), one consisted only of July session campers (i.e., 4-person focus group), and one consisted only of August session campers (i.e., 2-person focus group). One-on-one interviews were established with

the oldest volunteers, both of whom were 2<sup>nd</sup> year JC's and were experiencing their last summer at Brown Ledge. The researcher felt that the two year JC program, and the fact that 2000 was going to be the last summer at camp for these participants, constituted a far different experience for these two interviewees and therefore warranted individual interviews.

Interviews were conducted shortly after campers arrival, and just before their departure from camp. Therefore, interviews were conducted the first week of camp for the July session and full season campers, at "switchover" (i.e., the four-week point when the July session campers leave and the August session campers arrive), and at the end of camp. Because interviews were being done at "switchover" with the July and August focus groups, the researcher took advantage of the opportunity to meet with some of the full season groups as a sort of 'progress report.'

A previously established set of questions such as "why is \_\_\_\_\_ your favorite activity?" and "how do you decide which activity you want to participate in?," guided each focus group and interview, until and unless the conversation took on its own personality. Similar questions guided the interviews in the middle and at the end of camp.

To ensure sufficient data collection and triangulation, data was collected from many sources in addition to campers. Observations, informal interviews with long-time counselors and parents, historical documents written by the founders of the camp, photos depicting many aspects of the camp environment, and current records of the camp reputation and philosophy were collected and evaluated. Many of these sources provide additional insight to the success of the free choice philosophy with which the camp operates.

### Discussion of Results

The first result of this study indicated that intrinsic motivation level increased for young women who participated in the free choice program offered at Brown Ledge (see Table 1). Intrinsic motivation has been identified repeatedly as an essential element to a true leisure experience. Further, in order for intrinsic motivation to exist, activities must be freely chosen by the participant, free from all external motivating factors. The

philosophy of the Brown Ledge program caters to this notion. Young women enrolled in the program are required to make decisions for themselves, with little outside influence or judgment from family and friends. Though campers are encouraged to participate in activities, they are also given the freedom not to choose, rather to spend time in their cabin or talking with friends, etc. Thus, when activities are chosen, they are free from external pressure, reward or judgment, and are therefore intrinsically motivated.

The data for this study however, did not show a significant increase in self-esteem for participants in the free-choice program, though it was approaching significance (see Table 1). This finding is contrary to what may have been expected, as previous research repeatedly suggests that participation in recreation activities, and furthermore, freely chosen leisure activities greatly increases self-esteem among participants (Diener, Emmons, & Larsen, 1986; Larson, 2000; Shaw, Kleiber & Caldwell, 1995. Thus, the result that subjects experience increased intrinsic motivation would also suggest that subjects would experience increased self-esteem. Results from prior research in this regard, in addition to the nearing significance found here indicate that further research is warranted.

Emerging themes from qualitative data appear to support the literature that participants in a free choice program benefit from increased levels of self-esteem and intrinsic motivation. Elements of self-esteem and intrinsic behavior emerge from the data.

#### Self expression (self-esteem):

My friends at home are different than my friends at camp. [My camp friends have] confidence...I can sum it up in one word. Confidence. (Anna, 17)

#### Perceived control (intrinsic motivation):

I'm able to be on my own, make my own decisions... there's a lot of trust. They trust that you know what you are doing. Between the counselors, and campers, and trust in yourself, too. (Zoe, 15)

**Table 1. Paired t-Tests of Pre- and Post-Test Means for Self-Esteem and Intrinsic Motivation**

	Pre-test Mean	Post-test Mean	N	df	t
Self-Esteem	3.23	3.29	35	34	-1.002
Intrinsic Motivation	5.04	5.19	36	35	-2.078*

sig. @ .05 level

### Competence (intrinsic motivation):

Brown Ledge helped me work through things because it helped me see that I could excel in things. I can do things, I am talented. (Zoe, 15)

Results of this study suggest that the free choice program offered at Brown Ledge provides participants with increased levels of intrinsic motivation, and the potential for increased levels of self-esteem with no discrimination against individuals who spend less time in the program. A limitation to this study was that it was short-term in nature. That is, this study evaluated the benefits received by the participants in the free choice program only immediately after leaving Brown Ledge. There are some limitations to this study that must be considered. First, the researcher was and is an avid Brown Ledger. This may have affected both the quantitative survey responses and qualitative interview responses of the participants. Additionally, because campers volunteered to participate, those who had negative feelings toward camp may not have been well represented.

### Future Research

There are several opportunities for future research within this current project. It may be interesting in the future to assess the long-term benefits of the program by surveying subjects months, and even years after their participation. Following campers from their first years at camp at age ten or younger, through the Junior Counselor program (i.e., ages 16-18) may yield some interesting developmental results. Additionally, Brown Ledge has a strong and devoted alumnae following. A project evaluating this group, their feelings toward camp, and an investigation of the benefits they perceive themselves to have received from camp, may provide valuable insight into some long-term benefits the Brown Ledge program provides. An exploratory study of parents' opinion of Brown Ledge Camp and whether their daughters are effected by it may present some interesting findings. Further, the Brown Ledge philosophy may naturally attract adolescent girls are motivated, confident individuals. In order this possibility, it may be valuable to conduct a comparative study between Brown Ledge Camp and its unique philosophy with a camp with a more structured, planned program.

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## OUTDOOR EXPERIENTIAL-BASED TRAINING: MOTIVATIONAL AND ENVIRONMENTAL INFLUENCES AFFECTING OUTCOMES

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**Abstract:** The purpose of this study was to go beyond the examination of the single construct of team building by measuring the impact of motivational and environmental factors on the effectiveness of an outdoor-based training (OBT) intervention. The study assessed the self-perceptions of trainee attitudes and attributes that influenced the constructs of motivation to learn, learning which was operationalized as team building, and the motivation to transfer newly acquired knowledge to the work setting. There were six social and situational factors selected as independent variables: age, number of years with the current employer, presence of a supervisor, previous team building experience, fear and work environment favorability. A conceptual framework of trainability in OBT was proposed and tested in this study. In examining the relationships between the constructs motivation to learn, learning, motivation to transfer learning and the independent variables, it was concluded that fear, especially social fear, negatively impacted each of these constructs just as work environment favorability positively influenced all of them. Age and previous team building participation significantly influenced team building outcomes. Additionally, men and women differed significantly on the overall scale of team building. The motivation to transfer learning was also affected by previous experience as well as the number of years a trainee had been with the employer. The presence of one's supervisor was not a factor in any of the equations. This evaluation further described the effectiveness of outdoor-based training given trainee attitudes prior to and following a training experience. Many of the primary findings of this study are congruous with the work of others (Huczynski & Lewis, 1980; Hicks, 1984; Noe & Schmitt, 1986; Galpin, 1989; Dunford, 1992; McGraw, 1992) in both traditional training settings as well as OBT. By understanding the strength of these relationships and going beyond solely measuring training outcomes, the results of this study have contributed to understanding some of the factors that influence outdoor-based training programs.

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### Introduction

Outdoor-based training (OBT) programs utilize adventure activities to foster the personal and professional development of corporate managers including but not

limited to team development, leadership skills, decision making, and self-awareness (Beeby & Rathborn, 1983; Mossman, 1983). Outdoor-based training activities generally fall into one of five categories: socialization games, group initiative tasks, ropes courses, outdoor pursuits and "other adventures" (scenarios and distantly related exercises in development training) (Agran, Garvey, Minor & Priest, 1993).

The crux of the research in OBT is that these five categories of activities form the collective treatments that have been studied and reported in the literature in the past. Due to the nature of these activities, there is ambiguity as to which classification some activities fall under, thereby confusing study results and limiting generalizability. As an example, researchers have melded group initiatives and rock climbing courses into one treatment (Priest, 1996).

Adding to this confusion is that OBT can be classified into one of four kinds of formats just like other outdoor adventure programs. As with recreational programs some outdoor-based trainings are offered as entertainment, giving the participants the "lite" version of the team ideals but mostly emphasizing the fun and enjoyment of being with colleagues. Other OBT are offered in an educational format, providing short programs designed to convey new knowledge, awareness and concepts while demonstrating the importance of teamwork. The third type of program is the developmental program, which is aimed at changing the way participants act, think and feel. The objective is to enhance functional behaviors and introduce new ways of conduct. These sorts of programs are offered where there is organizational commitment to real, specific team building. And, finally, therapeutic programming in OBT targets work groups or teams in conflict. Programs are designed specifically to repair relations, manage strife and address dysfunctional behaviors (Priest, 1996).

This booming trend toward the use of adventure programs in management training is not without its issues. Much controversy and debate exists as to whether or not these types of training programs impact or change participants' work attitudes, behaviors and effectiveness in the job place. Critics contend that outdoor training, among other things, is a waste of time and money as well physically unsafe (Miner, 1991; Wagner, Baldwin, & Roland, 1991; Wiesendanger, 1993). Identical outdoor-based team building programs for Master of Business Administration (MBA) students have also been received with skepticism (Wagner, Weis, & Mostad, 1994). There is speculation that, although most organizations and business schools support this notion of teamwork and teams, only lip service is given to the actual process because business schools do not know how to teach team skills (Dyer, 1987). If that is not enough, adventure educators (or facilitators as they are referred to in the marketing literature) moving within formal organizations as agents of change in itself is a controversial issue because they have crossed over into the domain of the organizational development consultant (Flor, 1991). And, lastly, there is also criticism of OBT providers who fail to adequately assess their client's objectives up front so as to design a program in a format that meets the needs of the trainee and the organization.

The increased popularity and spending on outdoor adventure-based training programs has not been paralleled by compelling empirical research and evaluation that would provide evidence demonstrating the effectiveness in either the corporate world or in the business school structure (Beeby & Rathborn, 1983; Tarullo, 1992). If OBT programs are indeed everything they are touted to be, their longevity as a training technique may be short-lived if the impacts and subsequent influences on participants are not documented. Outdoor training has come to a crossroads. It needs to have its credibility as a viable tool in organizational development established or be dismissed as a fad in professional training techniques that provides fun without results (Buller, Cragun & McEvoy, 1991).

### Theoretical Model of Trainability in Outdoor-Based Training Programs

When determining the likelihood of real training effectiveness, regardless of the venue - indoors or out of doors - or who the trainer might be, the influence and importance of program participant attitudes, values, interests and expectations cannot be overlooked. The degree to which a program participant is motivated to learn and to transfer learning is as important to training outcomes as is the trainee's cognitive ability and psychomotor skills. Although a program participant may have the prerequisite cognitive ability necessary to become proficient in the training material, if motivation is lacking or absent, training performance and outcomes can be expected to be poor (Noe & Schmitt, 1986). Motivation in the setting of a training program therefore becomes the factor that energizes or powers enthusiasm for the program, the stimulus that sways learning and content mastery, and an agent of maintenance that directly influences the application and retention of newly acquired knowledge and skills (Steers & Porter, 1983).

Trainability is a function of trainee ability, motivation and work environment favorability [Trainability =  $f(\text{Ability} +$

Motivation + Environmental Favorability)], according to Noe and Schmitt (1986). The perceptions of social support for the performance of newly learned behavior and the existence of task constraints within the organization to which a program participant returns are crucial factors to consider. The elements facilitating or inhibiting the motivation to transfer learning are influenced as much by organizational structures, processes and values as they are by participant values and beliefs.

Lack of motivation and enthusiasm for outdoor team training, in particular, may emerge in part due to the barriers that exist in the overall work environment or corporate culture. Consideration needs to be given to the type of culture that exists within an organization and the degree to which that organizational environment is compatible with the type of team building an experiential program provides (McGraw, 1992).

McGraw (1992) speculated that trainability in OBT is susceptible to the influence of trainee fears, although no empirical evidence exists to support this claim. Apprehension may certainly be implied if the fear of physical injury, embarrassment, self-disclosure and judgment are thought to be heightened by outdoor training programs. Other conditions affecting trainee physical and social comfort levels in an OBT program could be related to age, gender, race or years with the organization, but again this aspect of trainability remains untested.

The conceptual framework of trainability in OBT presented in this study was based on a number of variables identified in previous research (see Baumgartel, Reynolds, & Pathan, 1984; Ewert, 1987; Hicks, 1984; Huczynski & Lewis, 1980; Lodahl & Kejner, 1965; McGraw, 1992; Noe & Schmitt, 1986; Peters & O'Conner, 1980; Spector, 1988; Wagner & Roland, 1992) as relevant to the prediction of the relationships between the constructs of motivation to learn, learning or training outcomes, and the motivation to transfer learning (Figure 1).

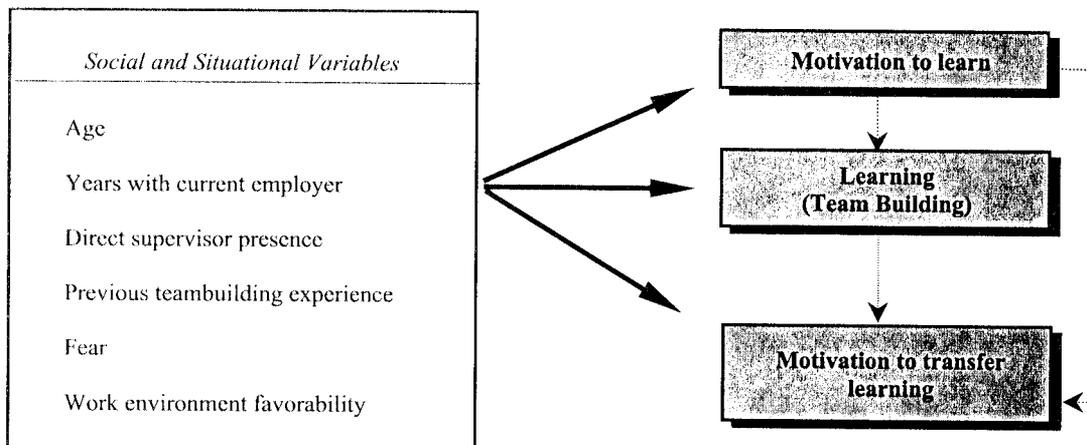


Figure 1. Hypothesized Influences Affecting Trainability in Outdoor-based Training

The model depicts the three dependent variables of this study, motivation to learn, learning measured as team building, and the motivation to transfer learning, in the shaded balloons. The social and situational factors (independent variables) were posited to have direct influences on the outdoor experiential team training program participant and were indicated by the solid linkages. The influence of these independent variables is projected to indirectly affect the relationships between the motivation to learn, learning (team building) and the motivation to transfer learning.

Describing the model begins with the understanding of the dependent constructs of the study. For the purpose of this study, motivation to learn was measured by the degree of job involvement (Lodahl & Kejner, 1965), readiness for training (Baumgartel et al, 1984; Hicks, 1984; Huczynski & Lewis, 1980), and the work place locus of control (Spector, 1988). As defined by Noe and Schmitt (1986) motivation is a desire on the part of the training participant to use knowledge and skills learned in a training program on the job. Training outcomes, or learning, was measured as program participant's self-perceptions and evaluation of the level of team development achieved after the conclusion of their team training workshop. The motivation to transfer the training happens when conditions exist where training participants feel confident about using new knowledge or skills, perceive the application of new knowledge resulting in improved job performance or aiding in the resolution of work related problems and addressing frequent job demands (Baumgartel et al., 1984; Huczynski & Lewis, 1980; Noe & Schmitt, 1986).

Factors hypothesized to influence individual lack of motivation toward participation in outdoor experiential training programs include fear of physical injury, strain or embarrassment; fear of the unknown; fear of self-disclosure; and fear of judgment or evaluation, which tends to be a particular problem for senior managers (McGraw, 1992). Demographics, specifically, gender and age, as well as the situational factors which include the presence of a supervisor, number of years with the current employer and any previous experience participating in team training programs were also considered as independent variables. Lastly, work environment favorability was predicted to impact all three of the dependent constructs as well. The opportunity to use newly learned behavior is influenced as much by the existence of task constraints in the work environment as it is by the amount of supervisory and peer support given to the trainee back on the job (Noe & Schmitt, 1986).

Although previous research has been weak in design, more recent investigations have had success in demonstrating sustained team development outcomes (Priest & Lesperance, 1994; Smith & Priest, in press), improvement of problem solving, trust, and commitment to group goals (Wagner, Dutkiewicz, Roland, & Chase, 1994) as well as positive increases in group awareness and group effectiveness (Wagner & Roland, 1992).

## **Purpose of the Study**

The purpose of this investigation was to measure the impact of motivational and environmental variables on the effectiveness of an outdoor experiential based training intervention. An organizing framework outlining factors effecting training and transfer in a one-day outdoor experiential based training course was used as a guide in this study. The self-perceptions of trainee attitudes and attributes that influenced motivation to learn, learning or training outcomes measured as team building, and the motivation to transfer newly acquired knowledge to the work setting were assessed. These three constructs were the dependent variables for this study. The independent variables for this study were age, number of years with the current employer, presence of a supervisor, previous experience, fear and work environment favorability.

It was hypothesized that the three dependent variables of motivation to learn, learning and the motivation to transfer learning would be directly related to the six independent social and situational variables.

Groups were solicited for their participation in the study by the training provider based on the organization's indicated commitment to building teams on the pre-course needs assessment form. It was also important that the program goals developed by the training provider focused on team development and were presented in an educational and/or developmental program format. Those groups wanting a recreational experience with the overall goal of the day emphasizing fun and entertainment were not considered for the study. Intact work groups, or as in this case, many smaller groups, coming to the training from the same large organization were the only type of participants selected to participate in the study.

## **Results and Discussion**

The data for this evaluation project was gathered from 109 full time employees coming to an outdoor-based training program from the same organization over the course of several weeks. Twenty-four unusable surveys were discarded from the sample for reasons of incompleteness or overt disregard for filling out the questionnaire. Of the 109 participants in the study, 90 were male and 19 were female with 87 of the trainees indicating that they were in sales and advertising positions, 11 in upper level management and 11 in support positions of the same manufacturing firm. The frequencies and distributions of the social and situational variables of the study are presented in Table 1.

Sixty-five percent indicated that they had been with their current employer ten years or less. Forty seven percent reported to have previously participated in team building. On the day of the training, 80% of the program participants noted that their supervisors were present at the site.

Several measures used in this investigation were developed by the researcher or adapted from prior research. A quasi-experimental design was used to gather data. The Pre-Program Survey was administered to the study's subjects

**Table 1. Background Profile of Team Building Participants**

Social and Situational Variables	N	%
<i>Gender</i>		
Males	90	82.6
Females	19	17.4
	109	100.0
<i>Age</i>		
20-29 years	8	7.3
30-39 years	39	35.8
40-49 years	39	35.8
50-59 years	21	19.3
60 years and older	2	1.8
	109	100.0
<i>Years with current employer</i>		
10 years or less	71	65.1
11-20 years	22	20.3
21-30 years	12	10.9
more than 30 years	4	3.7
	109	100.0
<i>Presence of a direct supervisor</i>		
Yes	87	79.8
No	18	16.5
Missing	4	3.7
	109	100.0
<i>Previous team building experience</i>		
Yes	51	46.8
No	57	52.3
Missing	1	.9
	109	100.0

when they arrived at the training site and prior to any participation in the training course (Time 1). This questionnaire measured the participant's motivation to learn and pre-course fears. The Post-Training Survey was administered at the conclusion of the team building training (Time 2). This survey was designed to assess the motivation to transfer training, level of team development and trainee perceptions of work environment favorability.

Pearson correlation coefficients were plotted in an effort to determine the size and the direction of the relationships between the constructs of motivation to learn, learning, the motivation to transfer and the independent variables. Regression analysis was used to predict one variable from the others as indicators of motivation to learn, learning and the motivation to transfer learning. Results of the stepwise multiple regression and correlation analysis are shown in Table 2.

In examining the relationships between the constructs motivation to learn, learning, motivation to transfer learning and the independent variables, it was concluded that fear, especially social fear, negatively impacted each of these constructs just as work environment favorability positively influenced all of them. Age and previous team building participation significantly influenced team building outcomes. The motivation to transfer learning was also affected by previous experience as well as the number of years a trainee had been with the employer. The presence of one's supervisor was not a factor in any of the equations.

**Table 2. Summary Multiple Regression Analysis of Social and Situational Variables on the Motivation to Learn, Learning and the Motivation to Transfer Learning**

Independent Social/Situational Variables	Dependent Constructs					
	Motivation to Learn (N=108)		Learning (Team Building) (N=108)		Motivation to Transfer (N=108)	
	r	Beta	r	Beta	r	Beta
Age	-.019	ns	.205*	.186*	.073	ns
Number of years with current employer	.128	ns	.150	ns	.224*	.177*
Presence of a supervisor	-.024	ns	.117	ns	.039	ns
Previous team building experience	-.107	ns	.184	.182*	.236**	.216**
Fear	-.205*	ns	-.186*	ns	-.323***	-.178*
Work Environment Favorability	.270**	.289**	.420***	.417***	.499***	.515***
	R <sup>2</sup> =.084		R <sup>2</sup> =.241		R <sup>2</sup> =.370	

\*\*\*Significant at .001

\*\*Significant at .01

\*Significant at .05

It is also important to interpret the values found in the rows, as well as highlight the influence of the social and situational variables in explaining the dependent constructs. To this end, it is noteworthy to recognize the  $R^2$  values for each of the regression models. The independent variables demonstrate, by a factor of four, their ability to explain the motivation to transfer learning over their predictive ability to explain the motivation to learn. These independent variables are also a important indicators of team building as demonstrated by the regression model ( $R^2=.241$ ).

Although the majority of the sample, 80%, indicated that their direct supervisor was present on the day of the training, this had no effect whatsoever on any of the constructs. While 47% of the sample noted previous team building experience, this variable did not come out as a correlate of team building when in the multiple regression equation previous experience proved to be a significant predictor of team building. A closer review of the correlation analysis output revealed a p-value equal to .058, thereby causing this variable to miss the significance cut-off at .05 by a small margin.

The variable fear proved to be a consistent and significant correlate of all the dependent constructs. Yet, fear only managed to stay in the regression equation long enough to be a significant predictor of the motivation to transfer training.

Work environment favorability was found to be the best predictor overall. This variable proved to have the strongest relationship with all of the dependent constructs. Work environment was also the strongest and most significant predictor out of all of the independent variables.

Figure 2 presents the resulting factors found to impact trainability in outdoor-based training programs.

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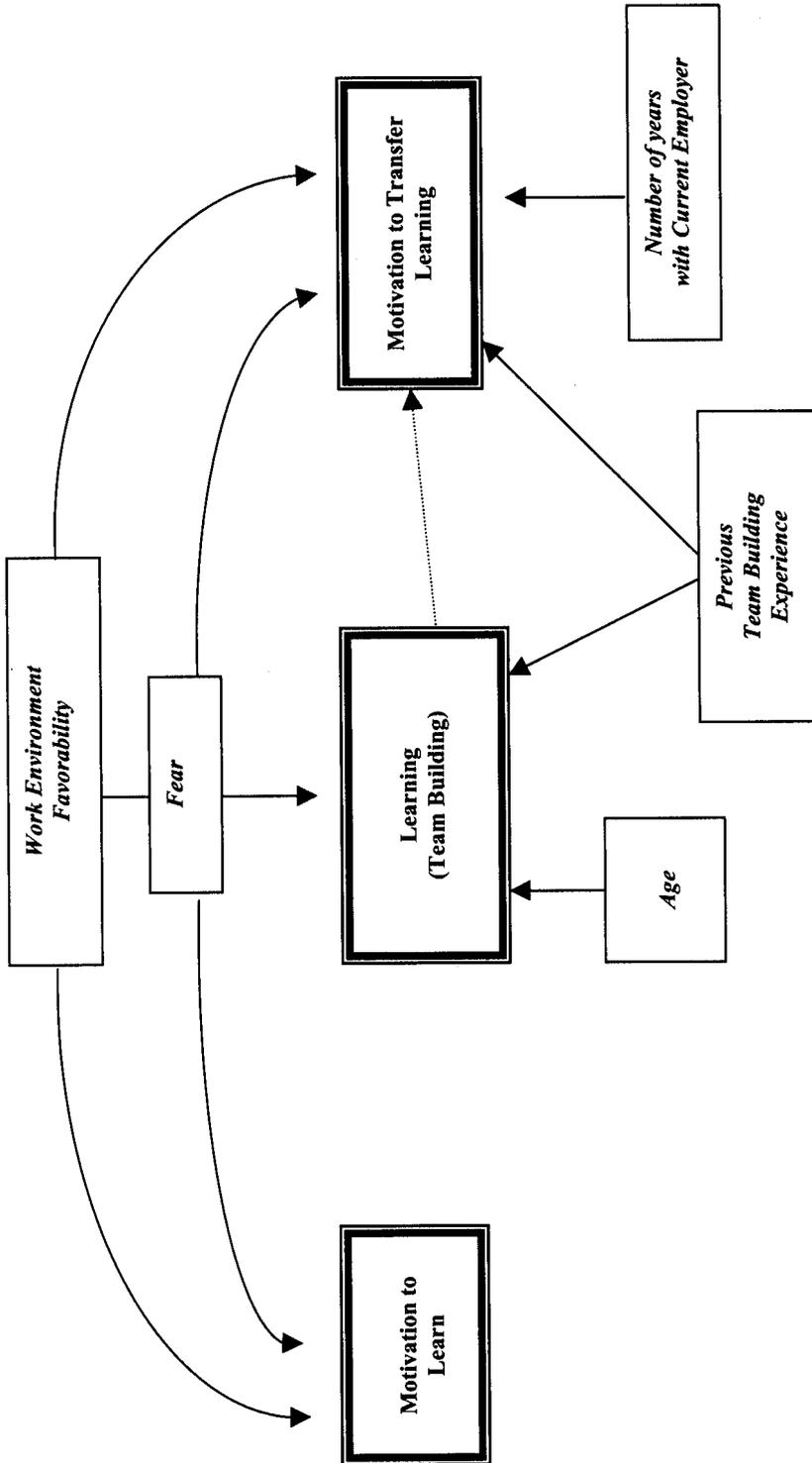


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## USE OF EXPERIENCE SAMPLING METHOD TO UNDERSTAND THE WILDERNESS EXPERIENCE

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**Abstract:** There is a growing body of research documenting the benefits of outdoor adventure and wilderness-based programs with a variety of special populations. Criticisms of this body of research are that it is not grounded in theory and it is outcome-based, with no investigation into the processes causing the behavior change in individuals. This study attempted to investigate the processes that occurred during wilderness outdoor adventure experiences in relation to social integration between people with and without disabilities. The contact hypothesis, from intergroup relations and social categorization theory, was used as a framework for understanding the social integration process. The role of wilderness in that process was illuminated through the use of experience sampling method with participants with and without disabilities on a series of wilderness canoe trips. This paper focuses on how the experience sampling method was implemented across several wilderness-based canoe trips and the resultant data. Subjects were participants with an outdoor adventure company that provides trips that include people with and without disabilities. During each of the seven trips studied, 2-3 participants were randomly chosen to participate in the experience sampling study. Participants were randomly beeped 4 times per day, when they would complete an experience sampling form. The dependent variables were inclusion and interpersonal attraction. Results showed that the most salient variable related to change in the dependent variables was awareness of the wilderness environment. Social identity theory, as operationalized by the contact hypothesis, was supported as a theoretical explanation of the process of inclusion and interpersonal liking that developed during the wilderness trips. The experience sampling method was helpful in "illuminating" the inside of the "black box" of the wilderness experience.

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### Introduction

There is a growing body of research documenting the benefits of outdoor adventure and wilderness-based programs with a variety of special populations (Anderson, Schleien, McAvoy, Lais, & Seligman, 1997; Hattie, Marsh, Neill, & Richards, 1997). Criticisms of this body of research are that it is not grounded in theory and it is outcome-based, with no investigation into the processes causing the behavior change in individuals (Hattie, Marsh, Neill, & Richards, 1997). Ewert (1982) stated, "In essence, we have discovered an educational black box; we know something works, but we don't know how or why" (p. 126). This study attempted to investigate the processes that occurred during wilderness outdoor adventure experiences in relation to social integration between people with and without disabilities.

The contact hypothesis, from social identity and social categorization theory, was used as a framework for understanding the social integration process (Desforges et al., 1991; Fiske & Taylor, 1991; Messick & Mackie, 1989; Turner & Oakes, 1986). Social identity theory states that people perceive themselves to be members of certain groups within a hierarchical structure of categories. Groups that contain the self are more positively regarded. The most basic level of categorization is that of humans from non-humans (Fiske & Taylor, 1991). The contact hypothesis is embedded in social identity theory, and states that structured contact allows outgroup members (e.g., people with disabilities) to be regarded more positively and as more like the social perceiver (Desforges et al., 1991). The contact hypothesis outlines five conditions for change to occur: 1) mutual goals and cooperation; 2) high acquaintance potential; 3) egalitarian or supportive norms; 4) equal status; and, 5) disconfirming evidence of the stereotype (Allport, 1954). The wilderness experience can potentially provide all those conditions, as well as change perceptions and attitudes in ways not identified. In this study, the role of wilderness in that change process was illuminated through the use of Experience Sampling Method (ESM), as well as journal writing, conversational interviews, and follow-up structured interviews with participants with and without disabilities on a series of wilderness canoe trips. This paper focuses on how the experience sampling method was implemented across several wilderness-based canoe trips and the resultant data.

### Overview of the Experience Sampling Method

The general purpose of the Experience Sampling Method (ESM) is to study the subjective experiences of persons interacting in natural environments. According to Csikszentmihalyi and Csikszentmihalyi (1988), the ESM allows investigators to get a "high resolution description of their (subjects') mental states right as they are happening" (p. 253). Conceptually, ESM exposes the regularities in the stream of consciousness of an individual, and attempts to relate these regularities to the characteristics of the person, of the situation, or of the interaction between person and the situation (Csikszentmihalyi & Larson, 1987). According to Csikszentmihalyi and Larson (1987), "The purpose of using this method is to be as 'objective' about subjective phenomena as possible without compromising the essential personal meaning of the experience" (p. 527).

The usual procedure used in ESM involves having the subject carry an electronic pager that emits random signals several times a day for several days. When the participants are signaled, they immediately respond to a series of questions, usually in a booklet of questionnaires they carry with them. The questionnaires are concise (usually two minutes or less to complete), so daily activity is interrupted as minimally as possible (Voelkl & Brown, 1989).

Questionnaires are designed by the researchers to meet the goals of the study (Csikszentmihalyi & Larson, 1987). Typical questions that have been included on questionnaires include open questions about thought contents, location, social context, primary and secondary activity, time, respondents' perceived situation and

emotional state, and specialized questions related to the dependent variable(s) under investigation. Questions have been asked about affect, cognitive efficiency, motivation, self-image, self-awareness, intervening daily events, alcohol and drug consumption, and perceived control, to name a few (Csikszentmihalyi & Larson, 1987; Kubey & Csikszentmihalyi, 1990; Voelkl & Brown, 1989).

ESM has advantages over direct observation and time diaries, two other methods of gathering data about day-to-day experiences and natural aspects of behavior. According to Voelkl and Brown (1989), when compared to live observation, ESM is not as intrusive, decreasing reactive behavior. It is also much more time efficient for the researcher. Compared to time diaries, ESM elicits data that is immediately recalled and is thus higher in quality than data that must be recalled about an entire 24-hour period, where distortions and rationalizations become contaminants (Csikszentmihalyi & Larson, 1987; Voelkl & Brown, 1989). Time diaries also do not provide the direct link between the person's thoughts and the context, as ESM does. The greatest strength of the ESM is that participants report their subjective states in addition to their objective environments or circumstances, providing richer insight than observation or time diaries (Voelkl & Brown, 1989). In addition, the signal devices can be set simultaneously to provide special opportunities for the analysis of the interdependence of experiences in groups, which would be difficult to achieve by any other method (Csikszentmihalyi & Larson, 1987).

Methodologically, limitations with the ESM are related to validity, reliability, and data analysis. Validity of the ESM have been explored by Csikszentmihalyi and Larson (1987) and by Mittelstaedt (1995). Constructs measured by ESM showed a convergent validity with conceptually related self-reports, such as self-esteem scales, or physiological measures, such as heart rate monitors. The results of ESM have also been found to be significantly different for groups of people, based on level of psychopathology, showing discriminant validity. Reliability of the ESM has been investigated by comparing ESM data with time diary data, showing the two methods to produce almost identical values of time allocation for different activities (Csikszentmihalyi & Larson, 1987). Also, the first half of a week's ESM data on activity involvement did not differ from the second half, confirming internal stability (Voelkl & Brown, 1989).

A major concern with the ESM is that subjects will become stereotyped in their responses and fail to differentiate between situations over time. Analysis of data comparing the variance in the data in the first half to the second half of the week's data showed that, with time, individual responses become more predictable, but activity effects remain stable (Csikszentmihalyi & Larson, 1987). These researchers deduce that there is not so much a lessened sensitivity to environmental effects, but a more precise self-anchoring on the response scales. Hurlburt and Melancon (1987), in an ESM study with a patient with schizophrenia, concluded that the method, which focuses attention on the subject's actual perceptions, seems to facilitate growth and have therapeutic benefits. Mittelstaedt (1995) found that the method provided accurate and honest responses, while

increasing self-examination, when she interviewed several subjects after a week of participating in the ESM.

Another concern with the ESM is its intrusiveness. Participant evaluations of ESM conducted by numerous researchers have found the method to be acceptable and not disruptive for 68-95% of the participants involved and found that it represented their experiences well (Csikszentmihalyi & Larson, 1987; Mittelstaedt, 1995; Voelkl & Brown, 1989).

Because data collected using the ESM is clustered, i.e., several questionnaires are completed by one subject, standard statistical procedures that assume a sample of random, independent measurements must be used with care (Samdahl, 1989). Samdahl (1989) has outlined clearly how the data must be analyzed, depending on the unit of analysis used in the study, whether it be the person or the experience. In particular, she warns that the unit of analysis be made clear and that the clustered nature of the sampling be taken into consideration. If these issues are addressed, the data analysis can provide meaningful insights into the nature of the experience and the individuals being studied.

Given the ability of the ESM to capture subjective experiences and objective data about the context of those experiences, it is an ideal method to study how people experience wilderness and others in their trip group. The purpose of this study, then, was to examine the mediating variables that could be related to the positive outcomes that result from involvement in outdoor adventure/wilderness experiences. For purposes of this study, social integration between people with and without disabilities and attitude change were the outcome variables examined in relation to the process variables of the wilderness experience.

## Methods

Subjects were participants with Wilderness Inquiry, an outdoor adventure company based in Minneapolis, Minnesota, that provides trips that include people with and without disabilities. Trips ranged in length from three to seven days. During each of the seven trips studied, two to three participants were randomly chosen to participate in the experience sampling study from trip groups of 8-12 people. Subjects included people with and without disabilities. Participants were randomly beeped four times per day, when they would complete an experience sampling form (ESF). Beeper devices used in this study were *Casio* waterproof wristwatches with five independent alarms, which the researcher set each morning according to a predetermined schedule developed with a random numbers table. The booklet of ESF's, which were the size of a passport, were carried with participants throughout the day in waterproofed plastic bags. Participants were asked to complete the ESF within 20 minutes of being beeped. The ESF asked for a "think aloud," (Taylor & Fiske, 1981), and then several Likert-scaled and semantic differential questions related to the context of the trip, level of awareness of certain variables related to the contact hypothesis, perceived state, and additional open-ended responses (see Figure 1 for the ESF). Data were analyzed using the sampled experiences as the unit of analysis.

**PROTOCOL FOR THE EXPERIENCE SAMPLING METHOD\*  
INTEGRATION THROUGH ADVENTURE  
WILDERNESS INQUIRY**

Thank you for agreeing to participate in this research project. Your participation will make a valuable contribution toward understanding more about wilderness-based outdoor recreation and social integration.

In this study, you will use the Experience Sampling Method, which allows the researchers to understand everyday experiences. During this trip, you will wear an alarm wrist watch and carry a booklet of questionnaires. When you are "beeped" by the alarm on the watch, please give honest and candid responses to all questions. The success of this study depends on your willingness to give your candid responses to the questions being asked. Your responses will be kept anonymous.

Please follow this procedure:

1. Each day, the alarm on the watch will go off at random times throughout the day (4-5 times per day), between 8:30 a.m. and 9:30 p.m. The alarm will quit by itself after 20 seconds, but you may press the lower right-hand button to turn it off immediately, if you wish.
2. If the alarm does not go off for more than 5 hours, please let the researcher or trip leader know!!
3. When you are 'beeped' by the alarm, you need to:
  - a. Fill out one of the Experience Sampling Forms (ESFs) AS SOON AS POSSIBLE after the beeper signals you.
  - b. If more than 20 minutes passes between the "beep" and your filling out the ESF, just put down the time of the 'beep', where you were, what you were doing, and why you could not complete the form. Do not try to fill out how you were feeling.
  - c. The first couple of times you fill out the ESF, it will take 4 to 5 minutes, but by the next day, it should take only 2 minutes, because you will become familiar with the ESF.

- d. Be as COMPLETE as possible and yet as BRIEF as possible. Give us enough information to know where you were, what you were doing and thinking, and how you felt just before the beeper went off.
  - e. Fill out as much of the ESF as you can each time you are beeped. Circle the number that best describes how you think or feel on the questions with a number scale below them. If a question does not apply to the particular situation you are in at that time, mark the 'N/A' box (not applicable). Write any comments or thoughts you have by the questions themselves or in the comment section at the end of the questionnaire.
  - f. Each situation you are in when you are 'beeped' may be slightly different from those before it, so give as immediate and fresh a response as possible. Don't look back to previous sheets to see how you responded, even if the situation is similar to the one before it.
4. Wear your alarm watch and carry your ESF Booklet with you at all times (as much as possible) during the trip. The watches are waterproof and can be worn swimming or in the rain. Turn both the watch and the booklet in to the researcher or trip leader at the end of each day. We will give you a new booklet of ESFs and reset the alarms.
  5. Be sure all the questionnaire booklets and your alarm watch are turned in to the researcher or trip leader at the end of the trip.

**THANK YOU!**

\*Adapted from Kubey, R., & Csikszentmihalyi, M. (1990). *Television viewing and the quality of life: How viewing shapes every day experience*. Hillsdale, NJ: Lawrence Erlbaum Assoc., Publ.

Time the beeper went off: \_\_\_\_\_ Time this form was filled out: \_\_\_\_\_

**JUST BEFORE THE BEEPER WENT OFF:**

What were you thinking about? \_\_\_\_\_

What was the MAIN thing you were doing? \_\_\_\_\_

Who were you with? \_\_\_\_\_

Where were you? \_\_\_\_\_

What was your immediate goal, as you were beeped? What were you trying to accomplish? \_\_\_\_\_

To what extent were you dependent on the group member(s) you were with to accomplish your goal?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Was the other group member(s) you were with actively helping you reach your goal?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Did you and the group member(s) you were with share the same goal?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

How equal did you feel to the group member(s) you were with in this situation?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Was the person you were with behaving or acting like you expected them to act?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

How well have you gotten to know the group member(s) you were with?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very well Not at all

How much do you like the group member(s) you were with?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Is the group member(s) you were with typical, or what you expected them to be?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Did you feel like an equal peer with the group member(s) you were with?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

How much do you feel the staff are supporting equality and fairness?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

How aware of the wilderness environment were you just prior to being beeped?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

How much does the wilderness environment matter to how you are feeling or what you are experiencing?

6	5	4	3	2	1	N/A
---	---	---	---	---	---	-----

Very much Not at all

Describe how you were feeling just as you were beeped:

	very	quite	some	neither	some	quite	very	unhappy
happy	_____	_____	_____	_____	_____	_____	_____	_____
irritable	_____	_____	_____	_____	_____	_____	_____	_____
lonely	_____	_____	_____	_____	_____	_____	_____	_____
detached	_____	_____	_____	_____	_____	_____	_____	_____
free	_____	_____	_____	_____	_____	_____	_____	_____
excited	_____	_____	_____	_____	_____	_____	_____	_____
competitive	_____	_____	_____	_____	_____	_____	_____	_____
relaxed	_____	_____	_____	_____	_____	_____	_____	_____
left out	_____	_____	_____	_____	_____	_____	_____	_____

Has anything happened to you since you were last beeped that affected how you feel?

\_\_\_\_\_

Any other comments or thoughts?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Figure 1. The Experience Sampling Form (ESF) Used in This Study

Descriptive data were computed, then raw scores were converted to z-scores and analyzed using stepwise multiple regression. The dependent variables were inclusion and interpersonal attraction.

### Results

In all, ESF's from 20 participants were analyzed, with a total of 309 useable questionnaires or "experiences," giving a response rate of 87%. The "topography" of the trip experience was captured through the descriptive results of activity patterns. In summary, the group members, when randomly beeped, were most often with others (86.1% of beeps), involved in a cooperative group activity of some sort (75.1% of beeps), and were around the campsite or out canoeing (78.6% of beeps). They typically perceived a group goal (44.3% of beeps) and their thoughts were usually focused on the current activity in which they were involved (40.8% of beeps).

Descriptive results for the Likert-scaled items on the ESF had average scores of '4' or '5,' meaning that participants were rating the variables being measured on the questionnaire as 'somewhat to much present' in their awareness when they were beeped. The variable, supportive norms, had the highest mean (5.46) with the smallest standard deviation (.88). This variable was consistently rated as being "very much" present in their awareness when participants were beeped. Interpersonal liking was also high (mean=5.12, SD=.99), meaning most members were feeling positive toward each other during the trip. On the semantic differential scaled items, the four

items comprising the 'inclusion rating' had means all above '5,' indicating that on average, participants felt some to quite included. For the feeling items, the mean was again above '5' for all items, except the 'excited-bored' item. In general, participants were perceiving positive feelings when beeped throughout the trip experiences.

Results of the correlation and multiple regression analysis are shown in Table 1 and Table 2 respectively. For the multiple regression analysis, the dependent variables were interpersonal attraction and inclusion. The influence or predictor variables were the conditions of the contact hypothesis (interdependence, cooperation, mutual goals, equal status, acquaintance potential, and supportive norms), awareness of wilderness, and effect of wilderness on state/feelings. In Table 1, the correlations between the dependent and predictor variables are shown. Cooperation, mutual goals and awareness of the wilderness were all significantly related to feelings of inclusion. Equal status, acquaintance potential, supportive norms, and awareness of wilderness were all significantly related to interpersonal liking of group members.

As can be seen in Table 2, results of the multiple regression showed that the most powerful predictor of inclusion was awareness of the wilderness environment ( $R=.40$ ). The second predictor, which best improves upon the prediction of the first variable, was mutual goals. No more variables added to the prediction of variance in inclusion at the .05 level of significance. Given the high correlation between mutual goals, interdependence, and cooperation, it was understandable why these variables did not add any more

**Table 1. Correlations between Predictor Variables and Dependent Variables**

Dependent Variables: Predictor Variables:	Inclusion	Interpersonal Liking
	r	r
Interdependence	.17	.01
Cooperation	.37***	.12
Mutual goals	.37***	.16
Equal status	.09	.21*
Acquaintance potential	.15	.61***
Supportive norms	.12	.29**
Awareness of the wilderness	.40***	.21*
Wilderness effect on feelings/state	.19	.06

\*p<.05 \*\*p<.01 \*\*\*p<.001

**Table 2. Results of the Stepwise Multiple Regression**

Predictor Variables with Dependent Variables:	Beta	r	R	R <sup>2</sup>	R <sup>2</sup> increment
Inclusion Rating:					
Awareness of the wilderness	.40	.40	.40	.16	
Mutual goals	.32	.37	.51	.29	.13
Interpersonal Liking:					
Acquaintance potential	.61	.61	.61	.37	

prediction to the variance in the inclusion score and were not added into the multiple regression equation. Mutual goals accounted for 13% more variance of the variance in inclusion ( $R^2=.13$ ) than can be explained by awareness of the wilderness environment alone. The most powerful predictor for interpersonal liking was high acquaintance potential ( $R=.61$ ). The coefficient of determination was ( $R^2$ ) was .37, meaning that high acquaintance potential could predict 37% of the variance in interpersonal liking at the .05 level of significance. There were no other variables that added to the prediction in variance in interpersonal liking.

## Discussion

Social identity theory, as operationalized by the contact hypothesis, was supported as a theoretical explanation of the process of inclusion and interpersonal liking that developed during the wilderness trips, with the salience of the wilderness setting being an added variable. Awareness of the wilderness and mutual goals were the most powerful predictors for change in feelings of inclusion. High acquaintance potential was the most powerful predictor for interpersonal attraction. Being in the wilderness, sharing goals, and spending time together appear to be most related to change in social integration in a group. It is possible that wilderness acts like an "incubator" for more rapid change.

When people are no longer surrounded by a world dominated by human activity, but instead surrounded by wilderness, a change in categorization may shift to the more basic level of human versus non-human. The referenced ingroup becomes 'human,' not 'people without disabilities' or 'people with disabilities.'

The experience sampling method was helpful in "illuminating" the inside of the "black box" of the wilderness experience. The resulting data provided descriptive insight into what people are thinking, feeling, and doing during a wilderness experience. The method also provided theoretical insight, as the questions asked of subjects were framed around the theory under investigation. The resulting data gave the researcher ongoing and fine-tuned clues as to the relevance of the theory in explaining people's experiences. The richness of the ESM data is deep and this paper only presented a small portion of how it could be analyzed to provide illumination into the wilderness experience. Future research could focus on developing a "topography" of the wilderness experience, correlating feelings to activities, and to specific settings. Variables that interfere with the wilderness experience could be explored in greater depth, such as the notion of "crowding," "overuse," and contact with management activities such as backcountry rangers, signs, permit stations, etc.

The ESM does have its limitations. However, in this study, when asked in follow-up interviews, subjects did not feel the method was intrusive. They did feel like it caused them to stop and think about things more than they would have normally, prompting greater introspection. The high response rate (87%) indicated that being "beeped" was not that intrusive, or participants would not have responded so

consistently. However, by participating in the ESM, the experience was altered for participants, thus bringing into question the validity of the method in truly capturing experiences as people live them.

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## ENCOUNTERS AND THE GUIDED GROUP TRIP: GOING "ON THE SCENE" TO EXAMINE THE SITUATIONAL INTERPRETATION OF ENCOUNTERS

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**Abstract:** The disconnection between reported encounter norms and the number of encounters visitors can tolerate has disturbed recreation researchers for a number of years. Recent research suggests that visitors, specifically white water rafters on a guided group trip, make sense of encounters not normatively, but through a process of situational negotiation at the moment of the encounter (Jonas, Stewart, & Larkin, 2000). This research suggests that encounters are not evaluated positively or negatively, but are treated as "part of the experience." This study extends this research into other settings (lakes and rivers) and modes of travel (canoe and kayak). Much of Jonas et al.'s findings were supported: trip guides play a crucial role in the negotiation process; and encounters affirm group identity, often one that is superior to the encountered group. Setting and mode of travel differences were noted: encounters were more selectively interpreted on lake trips, where encounters were more often anonymous; and there was less of a "witnessing audience" effect on canoe and kayak trips (subdued activities) than white water rafting (risky activity).

### Introduction

The disconnection between what visitors report as their encounter norms and the number of encounters they will actually tolerate during their outdoor recreation trip has troubled recreation researchers for a number of years (e.g., Hall & Shelby, 1996; Patterson & Hammitt, 1990; Roggenbuck, Williams, Bange, & Dean, 1991). Because encounter norms, or the number of encounters a visitor can tolerate in a given area or specified length of time without feeling as though their recreational experience is being compromised, is the operational variable of many of the major research areas in recreation resource management, including conflict, solitude, crowding, and social carrying capacity research, this disconnect is a serious research and managerial problem. The lack of understanding about how people make sense of encounters during their outdoor recreation trip has led to contradictory research findings and given resource managers little direction for how to establish visitor limits or manage for visitor enjoyment.

Some of the weaknesses in encounter research have been linked to the methods of encounter research. Most often, encounter researchers use pre- or post- surveys that ask visitors about the number of encounters they would like to have during their visit (e.g., Hall & Shelby, 1996; Lewis, Lime, & Anderson, 1996; Patterson & Hammitt, 1990). The main criticism of this method is whether visitors are able to

decontextualize their encounters and report on them in numerical form. Roggenbuck et al. (1991) suggest that encounter norms may simply be numbers that visitors manufactured for a survey and not meaningful indicators of how many encounters a visitor can tolerate. They have suggested that surveys provide respondents with an option to respond that they "care [about encounters], but cannot give a number" (p. 151). Although this suggestion reduces the potential for respondent error, it is debatable as to whether it moves the level of understanding of encounters any further along. Indeed, even studies which acknowledge that encounters "involve much more than numbers and size of parties encountered" (Patterson & Hammitt, 1990, p. 263) seem hard pressed to find alternative ways to investigate encounters.

A second concern with encounter research is its focus on evaluating encounters as either "positive" (the visitor liked the encounter) or "negative" (the visitor disliked the encounter). Although some researchers have reported successes with this approach, (e.g., Lewis et al., 1996), other researchers have had difficulty finding a congruent relationship between reported encounter norms and subsequent evaluations of encounters. Patterson and Hammitt (1990), for example, reported that 61 per cent of respondents whose personal encounter norms were exceeded at one or more of three encounter sites (trailhead, trail, campsite) reported that the encounters were not "negative" and did not detract from the experience. The lack of congruence between reported norms and evaluations of encounters has led Patterson and Hammitt and others (e.g., Jonas, Stewart, & Larkin, 2000) to question the emphasis researchers place on "negative" encounters without considering how encounters may be "positive" experiences. However, a larger concern with this approach is that it is quite possible that visitors do not evaluate encounters in a way that can be made sense of in the simple and dichotomous categories of "positive" or "negative." Indeed, in the study by Lewis et al. (1996), respondents were more likely to give a neutral (didn't like or dislike) rating than either a positive or negative rating to an encounter. Thus, it is possible that methods which ask visitors to interpret encounters in this evaluative context may poorly capture the meaning of these encounters. Indeed, these categories can easily become complicated on occasions when a "positive" encounter has "negative" repercussions, or a "negative" encounter may lead to serendipitous or "positive" outcomes further along in the trip.

### Encounter Research: An Alternative Approach

Encounter research would benefit from employing techniques that approach the study of encounters from alternative theoretical and methodological perspectives. In particular, encounter research would benefit from using methods that can contextualize encounters and be able to analyze them beyond numerical and evaluative criteria. One method that may be very useful for this stream of research is participant observation. Participant observation allows researchers to be "on the scene," or present at the time of the encounter itself, to see what happens as visitors actually encounter one another.

Being “on the scene” for encounters is particularly important in light of recent research which has suggested that the meaning of encounters is situationally negotiated and based on the nature of the social interaction at the moment of the encounter (Jonas et al., 2000). In other words, visitors make sense of encounters as they happen. Together, encountering parties endow certain features of the encounter with meaning, make them significant, and establish a “definition of the encounter.” Thus, if encounters are situationally negotiated, what is less important for understanding encounters are the variables associated with particular characteristics of the visitor, the group being encountered, or the setting, and what is more important is the process by which visitors work together to make sense of their encounter.

Participant observation research also provides an opportunity to use alternative sampling strategies to investigate encounters. Most of the past encounter studies have begun by taking a random sample of visitors, then trying to account for differences in encounter norms by relating the norms to a host of visitor characteristics, including age, residence, level of experience, trip length, and activity (e.g., Hall & Shelby, 1996). However, an alternative strategy would be to sample based on a particular characteristic, such as trip context or modality, and explore how encounters relate to this characteristic. This was the approach taken in this study. Encounters for one type of visitor group was explored in this study: the guided group trip.

### **The Guided Group Trip**

The guided group trips of this study have three main characteristics. First, the trip is run by a trip leading organization that provides all of the necessary gear, food, and logistical support, for a fee. Second, participants sign up for a trip according to their desired trip destination. Often people sign up with a companion, but most of the participants are strangers to each other. Finally, and most importantly, guided groups have a trip leader, who literally guides the participants through the trip. Trip guides have a specific purpose: to create an overall enjoyable, fun, exciting, and interesting trip for the participants. Doing anything less is both bad for guiding and bad for business.

Guided group trips are an important segment of the visitor population for encounter researchers to study. Guiding organizations are serving a rising number and proportion of visitors to outdoor recreation areas (Ewert & McAvoy, 2000). According to Friese, Hendee, and Kinziger (1998), there were more than 700 group guiding organizations operating in the United States, serving an estimated 70,000 clients per year. Additionally, findings by Gager, Hendee, Kinziger, and Krumpe (1998) indicate that the number of these types of programs is increasing yearly. More importantly, because people who have never camped or participated in a certain outdoor recreation activity often take their first trip with a guided group, a large proportion of participants on guided group trips are first time visitors to an area and often first time campers. As a result, how encounters are experienced and interpreted in a guided group context may have major implications for establishing how the group participants make sense of encounters on

future outdoor recreation trips, including those they may take without a guided group.

### **Past Research on Guided Group Encounters**

Of all of the types of visitor encounters to study with participant-observation methods, guided group trips are likely the easiest to access. Compared to groups of friends or solo hikers, researchers can easily join guided groups by contacting a guiding organization and signing up for one of their trips. As a result, there have been a few participant-observation studies of guided group trips that have explored the nature of encounters. Neumann (1993), for example, joined an “alternative” bus traveling group to the Grand Canyon, and noted what happened when the group encountered other bus groups, particularly the mainstream or “mass” bus tourists, at attractions or rest areas. He found that encounters with other groups made certain group values explicit and relevant, which worked to facilitate solidarity and solidify group identity (in their case, an identity of being “unconventional” and “counter-culture”).

Jonas et al. (2000) collected participant observation data on commercial, research, and private river rafting trips in the Grand Canyon. The authors reported three major themes. First, most encounters between groups were evaluated positively by rafters, and seen less as an interference or disturbance and more as *part of* the river-rafting experience. The trip guides were found to have a significant influence as facilitators of the meaning of the encounters. Because it is in the guide’s best interest if their passengers have a good trip, the guides made efforts to facilitate a positive interpretation of encounters. Second, as with Neumann’s (1993) tour bus study, river rafting encounters had important consequences for group identity. Encountered groups played the role of “witnessing audience,” in front of which groups acted out and confirmed identities. For example, an encounter between a river running group and a helicopter group in the Grand Canyon gave the river running group an opportunity to define themselves as superior to and more “authentic” than that of the helicopter group. Finally, encounters on river rafting trips helped to facilitate individual river rafting identities. Encounters gave individuals the opportunities to come together and co-create an “adventurer” identity through exchanging stories, bearing witness, and creating narratives of situational danger.

These works provide a useful foundation for further exploration in the situational negotiation of encounters. However, it is worth exploring if and how these themes appear in other settings or using other modes of travel. Clearly, a river rafting trip in the Grand Canyon is an extraordinary outdoor recreation experience when compared to the typical range of recreational experiences. For most participants, rafting trips in the Grand Canyon are “once in a lifetime” trips, and it is possible that the themes discussed by Jonas et al. (2000) may be unique to the particular setting and/or activity. Thus, it is important to investigate how encounters on other types of outdoor recreation trips and to other locations also make sense of encounters. As such, the research questions for this study are:

How do groups make sense of encounters...

...in other settings?

...with other modes of travel?

Specifically, what similarities or differences are there in how canoeists and kayakers in regions of northern Minnesota and how river rafters in the Grand Canyon make sense of encounters?

Methods

For this study, I worked with a trip-leading organization based out of Minneapolis, called Outdoor Adventures (a pseudonym). I accompanied seven group trips with this organization in the summer of 2000. The trips varied according to length, number of participants, number of guides, mode of travel, and location. The shortest trips were three days long, and the longest trips were seven days long (for a total of 36 observation days). Groups ranged in size from seven to 13 participants, with two or three guides. Three trips were kayak trips and four of the trips traveled by canoe. All trips took place in recreational areas within a day's drive of Minneapolis (Table 1).

My role also varied across the trips. On four of the trips I went along as a registered group participant. On the other three trips, I was an assistant guide (Table 1). As an assistant guide, I worked for the guiding organization and as such I was responsible for the well-being of the participants. However, I was not the main decision-maker; this job was left for the "head guide." Although my ability to take notes was more limited on the trips I worked as a guide, the opportunity to be an "insider" with the trip leading organization proved to be very fruitful, and I gained a better understanding of the role of the trip guide in defining encounters.

I collected observations throughout the day in the form of jottings (abbreviated sentences, key words, phrases). Three times daily - at lunch, in the late afternoon, and late evening - I expanded the jottings into field notes. Within 48 hours upon return home from the trip, I typed my field notes into a computer. At the end of the summer, all of the typed field notes were loaded into NUD\*IST (Version 4.0), a computer data coding and retrieval system. I also conducted open-ended interviews with all of the head guides for the guided trips I observed, and transcribed and

entered this data into NUD\*IST, where it was also coded. I coded and retrieved all of my observations and interview transcriptions that involved or referred to interactions with other visitors, then analyzed this data for themes.

Findings

The following themes emerged from an analysis of the data:

Theme 1: Potential Encounters Are Selectively Interpreted as Encounters

When participants in guided groups come upon other visitors, they can choose one of two courses of action. They can choose to make meaning of the encounter, such as by talking to the visitors or by talking amongst themselves about the visitors. The term for this route of action is "doing interest." Alternatively, trip participants can try to make the encounter as meaningless as possible, or "do disinterest," by avoiding sustained interactions with and conversations about the visitors. Guided groups tend to "do interest" and "do disinterest" at different locations and times throughout a trip. In general, guided groups "did disinterest" while they were at their campsite and during the beginning and middle of the trips. They were more likely to "do interest" while they were traveling and were approaching the end of the trip.

It has long been recognized in encounter research that visitors are more sensitive to crowding at campsites and trails (Burch & Wenger, 1967). For trip leaders of guided groups, encounters at campsites are especially risky because they have very serious repercussions on the trip leader's ability to deliver a good trip if they turn sour. Of particular concern is the trip leader's ability to maintain an atmosphere of fun and intimacy during and after encounters. As one TL put it, "I'm always afraid when people come into our camps that it's going to screw up the mojo." Leaders generally prefer camping away from other groups because they are able to have "better control over the social [interaction] and less distractions." As a result, the trip leaders prefer not to make a big deal out of encounters with groups at campsites. In the following field note, Rick, the TL of the Voyageurs canoe trip, minimizes the disruption caused by an encounter with some motor boaters, quickly changing the subject when the group asked him about it:

Table 1. Characteristics of Trips Observed in Summer of 2000

Table with 6 columns: Location, Mode of Travel, Trip Length, No. of Participants, No. of Guides, Role of Researcher. Rows include St. Croix, Isle Royale, Apostle Islands, Voyageurs, and White Otter.

<sup>a</sup>Small canoes are 16-foot, two-person canoes.

<sup>b</sup>Voyageur canoes are 22-foot, five- or six-person canoes.

We were sitting around the campfire, and Rick (TL) was having us go around and tell everyone why we decided to come on the canoe trip. Midway through the round, some noisy boaters came by our island. It sounded like they had slowed down their boat and were close to shore, but we couldn't see them because it was too dark. Rick said why don't we take a break so people can go put on warm clothes. He then disappeared down toward the noise. A few minutes later, we reconvened at the fire. Someone asked Rick what the noise was, and he said that it was nothing, just some people out doing some night fishing. He then asked who hadn't had their turn to talk yet. (Field note, Voyageurs canoe trip)

Encounters while traveling and near the end of a trip, however, are less of a risk simply because they are short, and with less potential for disruption. Trip guides are more willing to "do interest" while traveling, and permit their group to interact with other visitors:

The paddling was slow as the group enjoyed their last day of kayaking on Lake Superior. We paddled close to the island so we could look at the activity along the shore. We passed by a group of three women who were sitting on an outcrop, taking a break from their hike. We waved our paddles to them, and they waved back. As Sandie [group member] passed them by, she asked them if they'd be at Rock Harbor tonight, and they said yes. Sandie replied, great, we'll see you there and we can all have a beer together. (Field notes, Isle Royale kayak trip)

These findings are similar to what Neumann (1993) and Jonas et al. (2000) found for tour bus and river rafting trips, where the trip leader also played a key role in establishing deciding where and when participants should interact with other visitors.

#### Theme 2: Encounters Affirm Group Identity

Both Neumann (1993) and Jonas et al. (2000) have suggested that encounters help solidify group identity through a process of "identification through comparison." When groups come into contact with other visitors, they are provided an opportunity to affirm their identity, and often they establish an identity that is superior in some way to the visitors they came in contact with. Typically, the superior identity is one of being a more "authentic" camper who is camping the "right" way. This same phenomenon was seen on the canoe and kayak trips, where the "right" way to camp involved traveling in a human-powered craft, which is better for the environment and a more interesting way to see the area:

We were paddling away from our campsite and toward the main boat channel. Ellerie points toward one of the motorboats in the channel that was fairly close to the canoe - a small aluminum

boat with an outboard motor on it. Three people were sitting in the boat, all facing into the wind caused by the boat's movement. "Look at them," Ellerie said "They don't look like they're having any fun." Amy, Ellerie, and I talk about how noisy those boats are and how cold the wind must feel on the faces of those boaters. (Voyageurs canoe trip)

The encounter need not be face-to-face for it to be used as a vehicle for identity-making. Indeed, all that is sometimes required is a visual or physical encounter, and a group will interpret it in such a way as to develop a sense of superiority or authenticity over other visitors. In the following example, an encounter with a "phantom" motor boating group affirms the group's identity as environmentally conscious saviors of the Apostle Islands:

As we reached the lee side of the island the wind died down and the kayaking was calm. We passed a point on shore where smoke was rising but no one was around. We paddled past it and then went back to it, and Angie (TL) got out of her kayak and went up the hill with Sheila's water bottle to put it out. When she returned the group cheered, and Patricia took a picture of Angie squirting water on the fire. Sheila said that she thought Angie should win a hazardous duty award. Angie was asked who she thought started the fire, and she said "probably a motor boater, they tend to be the least environmentally friendly of sailors, motor boaters, and kayakers. This doesn't do much to help my prejudices against motor boaters." Patricia said, "I didn't want to say anything, but that's what I was thinking too." The group resumed paddling back to camp. The last stretch of the paddle back was calm and peaceful. Sheila mentioned to everyone that it was her water bottle that was used for the fire dousing. "Give that woman an Oreo!" Jim replied. (Field notes, Apostle Islands kayak trip)

As mentioned earlier, Jonas et al. (2000) also discussed how encounters are often used to develop a superior identity within a group. However, I suggest that the anonymity of an encounter on a large body of water may lead to a more strategic use of encounters by a guided group trip leader. When encounters are anonymous, it is easier for trip leaders (and participants) to "scapegoat" other visitors or blame them for problems, in the way that Angie did with the motor boaters. We really had no idea how or by whom the fire was started. However, Angie and the group used the encounter to not only make themselves look good but to also make motor-boaters look bad. In a more bounded setting, such as a white water river, trip leaders have less of an option to use encounters strategically because most encounters are face-to-face. Indeed, a more strategic use of encounters may be associated with such features of the setting as visual expanse, probabilities of encountering face-to-face, or variety of trip routes.

### Theme 3: Encounters Allow Groups to "Act" as a Group

For many group guiding organizations, "group bonding" is a major component of the experience, and often more meaningful to the trip participants than either the activity or the interaction with nature (Arnould & Price, 1993). Indeed, guided group trip leaders work hard to "facilitate" a feeling of cohesiveness among the participants. A crucial way that individuals come to understand of themselves as a group is through action. In other words, when people act as a group, they start to feel like a group.

Both Neumann (1993) and Jonas et al. (2000) talked of the importance of encounters for providing a "witnessing audience" in front of whom groups can act out their "groupness." For the most part, these authors talked of how the groups they observed used other travelers as witnessing audiences in front of whom they performed a group action, such as going down a set of rapids, or visiting a tourist site. For example, Jonas et al. describe how other rafting groups often wait at the bottom of rapids and watch other groups ride the waves and cheer as they make it down safely. However, on kayak and canoeing trips, which are known much more for their opportunities for serenity than for risk, groups may not have access to as many opportunities for "witnessing audiences" as rafting trips because there simply isn't anything exciting or adventurous enough to witness.

Canoe and kayak trips do use encounters with other visitors as a way to act out their "groupness." However, the encountered visitors tend not to be spectators to the performance. Instead, they often become accomplices to the group's performance, and play a role in the performance itself. One common example of how encountered visitors become accomplices is when groups recruit a fellow visitor to take a group photo:

It was the last full day of the trip. We had kayaked to another island with a beach, and half the group went for a swim while the rest stayed on shore. People were playing in the water and having a really fun time. When the swimmers got out of the water, some people wanted to get some group photos. We organized ourselves into our group pose, front row kneeling, back row standing. Kim (TL) said she'd be the photographer and began to take pictures. After she took one or two, Janet said wait, why don't we ask that man to take them for us so you can be in them? A man had just pulled up to the beach in his motorboat and was walking down the beach in our direction. As he approached, Kim asked him if he wouldn't mind, and he said sure. About five different cameras were handed to the man, and the group posed as he went through all of them. The people who owned the cameras that Kim took pictures with wanted new ones taken with everyone in the picture. (Field notes, Apostle Islands kayak trip)

In this example, the kayak group used the encountered visitor as a way to reinforce that even Kim, the TL, was an important enough member of the group that it was worth disturbing another visitor in order to include her in the group photo.

Another way a group is able to "act" as a group in an encounter is through storytelling. Encounters are a crucial opportunity for groups to tell others the stories of their trip. Storytelling as a way of making meaning of a wilderness experience has been explored by Patterson, Williams, Watson, and Roggenbuck (1998), who found that reliving and sharing of an experience through stories was an important phase of the wilderness experience itself. Indeed, Patterson et al. suggest that perhaps "what people are actually seeking from their recreation experiences are stories which ultimately enrich their lives" (p. 449). Whereas Patterson et al. examined the stories told at the end of an experience, encounters with other visitors during a trip provide opportunities for guided groups to tell their stories during the trip itself. In this first field note, the guided group co-creates a story of surviving a torrential rainstorm with some visitors it passes by:

We paddled past a group we saw the day before, right before the storm let loose. One of their group came out onto the point and we paddled over to them so that we could talk. "That was some storm last night, wasn't it?" they called out. Scott (TL) said yes, and asked if they were all ok. They said that they were, and that luckily they had found a low spot out of the wind so they only got wet. "So much for 20% chance of rain!" they yelled. Bill joked that if last night was 20% chance of rain, he'd hate to see 100% chance of rain. He also joked that maybe the guy heard the weather report wrong and that what it really said was to expect a chance of 20 inches of rain. These jokes went around the canoes in a "what did he say?" type of way until everyone had heard them. (Field notes, St. Croix River canoe trip)

Other times, encountered visitors are strictly audience members:

We all got our stuff over to the ferry with plenty of time, and hung out on the dock with the other ferry goers. Nadine began talking to three women hikers, and other people we had seen along the way. Mostly she, and others in our group, talked with other groups about animals, food, and gear. Maureen told them how we saw a total of five moose, a fox, 4 eagles, and lots of birds. One of the food stories was about how we cooked the brownies in the fry pan. We had one of the women take a few last group pictures of us next to a sign that said "Isle Royale National Park." (Field notes, Isle Royale kayak trip)

Storytelling opportunities during the trip itself may be particularly important for the guided group trip. Compared to other visitors who take their trips with friends or family from home, guided group trips are often composed of people who are relative strangers before the trip begins, and who may or may not continue a relationship with after the trip ends. Thus, for these visitors, there may be no opportunity for recounting and retelling the trip with the fellow trip-takers once the group disperses upon return to the city. For this reason, trip leaders like to encounter other visitors near the end of trips:

I remember waiting for the ferry at the end, because we were talking to other people. And to me, that was a positive thing. I like to see them say, "Guess what we did, you should try this, you should come with us next time," or "It would be great, we were complete strangers just like you are with us, and that would be so fun, you'd love it." (Ben, TL, Isle Royale kayak trip)

As such, telling stories during the trip are extremely valuable sense-making opportunities, and may be the only opportunity for the group to collectively interpret their experience.

### Discussion

Overall, much of what Neumann (1993) and Jonas et al. (2000) reported in their studies also emerged as themes in this study. Across settings and modes of travel, guided groups use encounters to create and affirm group identity. Similarly, the role of the trip guides in helping groups know when, where, and how use encounters to build group identity also emerged as theme in this study. Compared to many other visitor types, guided group trip leaders are highly motivated to shape a group's experience in a certain way, and will use encounters to assist in this process.

Setting and mode of travel does appear to make a difference in how encounters are used by guided group trips. Wide, expansive settings give trip leaders and participants more opportunities to have encounters that remain anonymous, which can be used more deliberately to create an identity that is superior to the anonymous visitor. However, more subdued forms of travel may have less of the "witnessing audience" effect found in activities with heightened risk and danger, although encountered visitors are still incorporated into the identity-making process, via their participation in photo-taking and storytelling.

Employing alternative methodological approaches often simultaneously opens the door for examining phenomena from new theoretical perspectives. Indeed, this is the case with participant observation. Studying encounters with participant observation methods allows for access to understanding encounters as situationally defined interactions versus normative manifestations, which is more in line with the theoretical perspective of symbolic interaction (Blumer, 1967) than structural-functional analysis (e.g., Merton, 1973). As a result, alternative approaches often provide different interpretations to

phenomena, and indeed, this has happened with encounters. Rather than evaluations of encounters being treated as a comparison to an encounter norm, where positive feelings result when the norm is maintained and negative feelings result when the norm is violated, encounters are treated as events that visitors make sense of as they happen. And often visitors enjoy encounters they may not have expected to, or vice versa; even the best of potential encounters can turn out for the worse.

We should not be surprised or disturbed by the disconnection between encounter norms and evaluations of actual encounters. In fact, we should expect it. Many things can happen when people meet in the outdoors. Rather than asking about the before and after, we should investigate the moment of the meeting: the encounter itself.

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# **Leisure Motivations of Outdoor Recreationists**

## DIFFERENCES IN SCUBA DIVER MOTIVATIONS BASED ON LEVEL OF DEVELOPMENT<sup>1</sup>

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**Abstract:** This study examined SCUBA divers' level of development in relationship to their motivations to dive. During the fall of 1999, 869 divers ranging from beginners to post-experts were surveyed (37% response rate). Respondents ranked 24 motives on a 5-point importance scale. When the data were reduced using factor analysis to tease out major themes, six factors (explaining 60 percent of the variance) emerged: *adventure*, *learn*, *escape*, *social interaction*, *stature*, and *personal challenge*. When mean scores were compared among levels of development using one-way analysis of variance, all six factors differed significantly ( $p < .05$ ). However, when individual motives were compared, not every motive within each factor -- in fact, only 17 of 24 items -- differed by level of development. The results of this study verified that divers with higher levels of development are motivated to pursue the activity for different reasons, but not always as expected. *Adventure* and *learning* followed the predicted curvilinear pattern of increasing importance from beginners to experts and decreasing for post-experts. *Social interaction* displayed the predicted mirror image of that curve. Unexpectedly, *personal challenge* decreased and *stature* and *escape* increased with development.

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### Introduction

Motivation to participate in a given activity can be explained by expectancy-value theory, which states that motivation is determined by the attractiveness of outcomes and the expectation that participation will result in desired

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outcomes. This belief about the likelihood of achieving desirable outcomes fosters a positive attitude and intention to perform a specific behavior. Behaviors that are instrumental for goal achievement are evaluated favorably (Fishbein & Ajzen, 1975).

Expectancy-value theory also states that individuals may have a variety of motives for participating in an activity. Furthermore, persons within that activity may seek totally different outcomes. While some recreation research has focused on motives of those participating in different activities (e.g., the study of cross-country skiers and snowmobilers by Jackson and Wong, 1982), other studies examined the goals of those participating in the same activity (e.g., Ditton, Fedler, and Graefe's 1982 study of types of river floaters).

Since motives have been shown to be influenced by level of past experience (Schreyer, Lime, & Williams, 1984), it seems likely that they would differ by participants' level of development. The theories of specialization (Bryan, 1977; 1979) and amateurism (Stebbins, 1979; 1992) characterize participants' growth and development in leisure activities. Based primarily on outdoor recreationists, Bryan described participants on a continuum ranging from novice to specialist, with stages defined as a function of one's time, money, equipment, skill, and psychic commitment to an activity. Stebbins highlighted changes in "seriousness," where the casual dabbler may eventually progress to an employed professional in the fields of art, entertainment, science, and sport. He described the amateur's development in terms of a career history, with five stages of progression/retrogression: beginning, development, establishment, maintenance, and decline. Using risk recreation activities (e.g., kayaking, climbing, skiing, etc.), Robinson (1992) also focused on commitment to leisure activities. He generated a model for understanding phases and transitions of long-term (enduring) involvement. In each theory, individuals at different stages tended to place importance on, focus on, or strive for different outcomes.

Todd combined aspects of the above theories to operationalize level of development as a single measure. Results for quiltmakers (Todd, 1997; 1999a; 1999b; Todd & Graefe, in press) and SCUBA divers (Todd, 2000) demonstrated that having respondents choose a category of beginner, intermediate, advanced, expert, or "post-expert -- not the expert I once was" provided an adequate reflection of development-related factors. In all but one case, mean scores for indices measuring equipment owned, knowledge, experience, perceived skill, participation, commitment, and amateur/professional growth increased from beginner to expert and then decreased for post-experts. (Diving experience was the only exception to this pattern; due to its cumulative nature, experience level continued to increase for post-experts.)

Schreyer, Lime, and Williams (1984) found that veteran river recreationists ranked motives such as "to develop my skills" and "to test my abilities" much higher than novices. Furthermore, with higher levels of experience, the structure of the motive factors became increasingly complex (Williams, Schreyer, & Knopf, 1990). Going beyond

experience use history, Kauffman (1984) discovered that motives for canoeing changed as participants became more specialized. Differences between scores for nature, exploration, affiliation, and temporary escape suggested at least two levels of specialization, while even larger differences were found for three other expected rewards. Highly specialized canoeists were found to canoe for exercise, recognized the importance of their equipment to their experience, and received a sense of achievement from their experience. These studies suggest that the more specialized and serious participants are about their leisure pursuits, the more important intrinsic rewards of involvement and competence become.

### **Purpose of the Study**

This study examined SCUBA divers' level of development in relationship to their motivations to dive. It was hypothesized that divers' motives would differ by level of development such that the importance of motives related to the intrinsic rewards of involvement (i.e., challenge, adventure, and learning) would increase from beginners to experts and decrease again for post-experts. Conversely, the importance of more extrinsically-related motives (i.e., stature, social interaction, and escape) was expected to decrease from beginners to experts and increase again for post-experts.

### **Methods**

Data were gathered using two methods: focus group interviews and a mail survey. In June 1999, six focus groups were interviewed in five locations across New York's Great Lakes Region: Buffalo/Niagara Falls, Rochester, Syracuse, Oswego, and Clayton (2 groups). At each location, a key informant assembled 4 to 12 divers representing a wide range of levels of diving development. Using an established protocol, a series of 6 questions was asked; resulting discussion (lasting approximately 90 minutes) was tape-recorded. Major themes were extracted from this data to aid in the development of a written questionnaire. The questionnaire contained sections measuring diving experience, self-evaluation, diving motivations, diving in the previous year, constraining factors, diving expenditures, underwater environmental concerns, diving socialization, and demographic information.

This 16-page questionnaire was mailed to a sample of 2850 active and inactive New York State divers. To generate this sample, a database of approximately 6700 addresses was compiled from various sources, including a national certifying agency (Professional Association of Diving Instructors [PADI]), a statewide organization (New York State Divers Association [NYSDA]), a dive symposium (Great Lakes Underwater III Symposium), a dive shop (Syracuse's National Aquatic Service, Inc.), a non-profit organization (Bateau Below, Inc.), and several dive clubs (Rochester's Rec Divers club, Buffalo Aqua Club, Syracuse University's dive club, and Central New York Dive Club). Addresses were stratified by major regions across the state. Since primary emphasis was placed on contacting divers in the regions closest to the Great Lakes,

all available names from some regions were mailed surveys while a random selection process was used for other regions. The first mailing took place in October 1999, followed by reminder postcards and a second mailing of the survey to non-respondents.

For purposes of this study, respondents were asked to rank 24 motives on a 5-point scale ranging from 1 (not important) to 5 (extremely important). Level of development was operationalized by a self-selected single item; respondents were asked to characterize their current stage of development as a diver by choosing one of the following five categories: beginner, intermediate, advanced, expert, or "post-expert - not the expert I once was."

Factor analysis (principal components method of extraction, varimax rotation) was used to reduce the 24 motives into factors representing primary themes or reasons for diving participation. Cronbach's alpha was then used to test for inter-item reliability among the items in each factor having an Eigenvalue of at least 1.00.

One-way analysis of variance was used to determine if a difference existed among mean scores for each factor by level of development. To compare the differences between mean scores for each pair of developmental levels, Tukey's Honestly Significant Differences (HSD) was used as a post hoc test if the F-value was significant ( $p < .05$ ). To ensure that the scaled factors were not masking the effects of any component statement, each motive was also individually tested using the same procedures.

### **Results**

More than 17 percent of the surveys (490 out of 2850) were returned as either undeliverable or as having been sent to non-divers. While 10 percent is a more common statistic for studies of this sort, a higher rate was not surprising; in order to tap inactive divers for one aspect of the larger project, some of the addresses were at least 10 years old, increasing the chance of outdated information. Of the remaining 2360 potential respondents, 869 surveys were returned for a 37 percent response rate. A non-respondent bias check conducted by telephone revealed that non-respondents did not differ significantly from respondents based on age, gender, education level, number of years spent diving, or level of development. However, significantly fewer non-respondents were certified divers (76 percent versus 97 percent of respondents) or active divers (48 percent versus 69 percent of respondents). Thus it is important to note that diving was likely to have been more salient for respondents than non-respondents when interpreting results.

A profile of the respondents revealed that 80 percent were male. Although the average age was 43, ages ranged from 12 (the minimum age of dive certification) to 80. In general, respondents were well educated and had lucrative jobs. Half of the respondents had received 2- or 4-year college degrees, while another fourth had earned advanced degrees. Fifty percent reported earning more than \$60,000 in yearly household income.

When all responses were considered regardless of level of development, the most important motives were related to the diving environment or to the thrill of diving itself. Similar to the findings of Ditton and Baker (1999), the top dive motive was *to look at underwater animal and plant life* (mean of 4.2), followed by *to explore things* (4.1), *for the adventure of it* (3.9), *because it is stimulating and exciting* (3.8), and *to learn more about the underwater environment* (3.7). (See Table 1.) Rated at the bottom of the list were reasons that may have been influenced by societal pressures and norms; these items were related to “showing off” (e.g., *it’s sort of an impressive thing to do* [mean of 2.1] and *to use my equipment* [2.6]) or tended to project an image that divers want to dispel as public perception (e.g., *to collect interesting artifacts* [2.4] and *because of the risk involved* [1.7]). The lowest rated item reinforced the notion that perception of risk depends largely on degree of involvement; those who actually participate in the activity consider it safe, while those who are “outsiders” view it as risky.

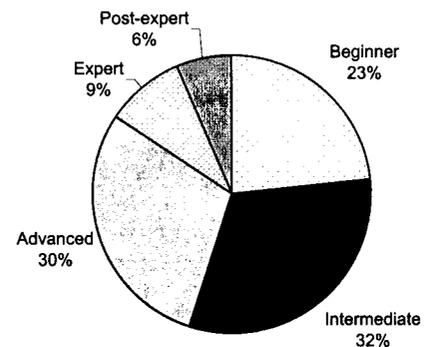
**Table 1. Motives for Diving Participation**

Motive	Mean	sd
To look at underwater animal and plant life	4.2	.90
To explore things	4.1	.80
For the adventure of it	3.9	.96
Because it is stimulating and exciting	3.8	1.04
To learn more about the underwater environment	3.7	1.07
To develop my diving skills and abilities	3.6	1.02
For relaxation	3.6	1.17
To experience peace and tranquility	3.4	1.24
For a change from everyday life	3.4	1.16
To gain an experience I can look back on	3.3	1.21
To see historically significant shipwrecks	3.2	1.35
Because I thought it would be a challenge	3.0	1.14
So I could do things with my friends and/or family	3.0	1.29
To give me a feeling of confidence in myself	2.8	1.25
To help keep me physically fit	2.8	1.21
To meet new people	2.8	1.20
To share my skill and knowledge with others	2.7	1.25
To do something creative, such as take pictures or videos	2.7	1.33
To show myself that I can do it	2.7	1.33
To study underwater geological formations	2.6	1.26
To use my equipment	2.6	1.25
To collect interesting artifacts	2.4	1.28
It’s sort of an impressive thing to do	2.1	1.12
Because of the risk involved	1.7	1.03

Values are mean scores on a 5-point scale as follows: 1=not important, 2=slightly important, 3=moderately important, 4=very important, and 5=extremely important.

When these data were reduced using factor analysis to tease out major motivational themes, six factors (explaining 60 percent of the variance and having acceptably high scale reliabilities) emerged: *adventure* (with the highest mean scale score of 3.9, reliability coefficient or Cronbach’s alpha of .81), *learn* (3.5, alpha of .71), *escape* (3.3, alpha of .72), *social interaction* (3.0), *stature* (2.7, alpha of .71), and *personal challenge* (2.6, alpha of .81). As shown in Table 2, the *personal challenge* theme emerged as the strongest factor, explaining nearly 30% of the variance. This factor was highlighted by 6 items related to challenging and proving oneself, as well as highlighting diving as a slightly impressive, risky experience. The *stature* factor added an additional 10% of explained variance. Similar to Ewert’s “image” factor (1993), this theme was characterized by 6 “visible” outcomes of diving, the external “tangible” results about which a diver could possibly “brag.” The 4 items in the *escape* factor (nearly 7% of explained variance) encompassed not only relaxation, peace, and tranquility, but also escaping everyday life and everyday people. The *learn* factor (5% of the variance) included 4 items revolving around the natural environment plus developing diving skills and abilities. Another 5% of the variance was explained by the 3 items in the *adventure* factor, and the final factor consisted of a single item related to being with others (*social interaction*).

Of the 847 respondents who selected a category to represent level of development, 198 were beginners, 267 marked intermediate, and 250 were advanced. Only 77 considered themselves to be experts and just 55 labeled themselves as “post-expert” divers. (See Figure 1.)



**Figure 1. Level of Development**

When mean motive scores were compared among levels of development using one-way analysis of variance, all six factors produced significant F-values ( $p < .05$ ). While three factors (*learn*, *adventure*, and *social interaction*) were only able to reveal one significant difference using Tukey’s HSD post hoc test, the *stature* factor was the most discriminating, uncovering eight significant differences among levels of development. The remaining two factors fell in between, with *personal challenge* detecting four differences and *escape* finding three. In order to discover if the factors were masking or hiding the effects of any of the individual motives, not only each factor but also its respective items were tested (see Table 3).

**Table 2. Results of Factor Analysis of Motive Items  
(Principal Components Extraction, Varimax Rotation)**

<b>Factor Name and Item Content/Loading</b>	<b>Factor 1: <i>Personal Challenge</i></b>	<b>Factor 2: <i>Stature</i></b>	<b>Factor 3: <i>Escape</i></b>	<b>Factor 4: <i>Learn</i></b>	<b>Factor 5: <i>Adventure</i></b>	<b>Factor 6: <i>Social Interaction</i></b>
To show myself that I can do it	.82					
Because I thought it would be a challenge	.72					
To give me a feeling of confidence in myself	.71					
Because of the risk involved	.62					
It's sort of an impressive thing to do	.62					
To gain an experience I can look back on	.57					
To see historically significant shipwrecks		.76				
To share my skill and knowledge with others		.68				
To use my equipment		.61				
To collect interesting artifacts		.58				
To help keep me physically fit		.51				
To do something creative, such as take pictures or videos		.44				
For relaxation			.77			
For a change from everyday life			.65			
To experience peace and tranquility			.63			
To meet new people			.45			
To learn more about the underwater environment				.82		
To look at underwater animal and plant life				.76		
To study underwater geological formations				.50		
To develop my diving skills and abilities				.43		
For the adventure of it					.72	
To explore things					.61	
Because it is stimulating and exciting					.53	
So I could do things with my friends and/or family						.80
<b>Eigenvalue</b>	7.15	2.32	1.60	1.60	1.08	1.01
<b>Proportion of variance explained</b>	29.8%	9.7%	6.7%	5.1%	4.5%	4.2%
<b>Cumulative variance explained</b>	29.8%	39.5%	46.2%	51.3%	55.8%	60.0%
<b>Mean scale importance score</b>	2.7	2.7	3.3	3.5	3.9	3.0
<b>Cronbach's alpha</b>	.81	.76	.72	.71	.71	--

Table 3. Motivation Factors and Individual Motives: One-way Analysis of Variance Using Mean Scores of Divers with Different Levels of Development

Statement	Total (n=847)	Level of Development					F	p <	# of Differences Detected
		Beginner (n=198)	Intermediate (n=267)	Advanced (n=250)	Expert (n=77)	Post-expert (n=55)			
<b>FACTOR 1: PERSONAL CHALLENGE</b>									
To show myself that I can do it	2.61	2.77 <sup>a</sup>	2.67 <sup>ac</sup>	2.51 <sup>bc</sup>	2.27 <sup>b</sup>	2.71 <sup>ac</sup>	6.28	.0001	4
Because I thought it would be a challenge	2.69	3.18 <sup>a</sup>	2.84 <sup>b</sup>	2.35 <sup>c</sup>	2.03 <sup>c</sup>	2.63 <sup>bc</sup>	17.81	.0001	6
To give me a feeling of confidence in myself	2.99	3.05	3.01	2.96	2.82	3.00	0.61	.66	n.s.
Because of the risk involved	2.81	2.90	2.84	2.79	2.52	2.89	1.40	.23	n.s.
It's sort of an impressive thing to do	1.73	1.86 <sup>a</sup>	1.76 <sup>a</sup>	1.68 <sup>ab</sup>	1.38 <sup>b</sup>	1.81 <sup>ab</sup>	3.42	.01	2
To gain an experience I can look back on	2.14	2.29	2.15	2.02	1.91	2.35	2.92	.05	0
	3.31	3.34 <sup>ab</sup>	3.40 <sup>a</sup>	3.25 <sup>ab</sup>	2.97 <sup>b</sup>	3.56 <sup>a</sup>	2.67	.05	2
<b>FACTOR 2: STATURE</b>									
To see historically significant shipwrecks	2.72	2.29 <sup>a</sup>	2.58 <sup>b</sup>	2.96 <sup>c</sup>	3.12 <sup>cd</sup>	3.30 <sup>d</sup>	33.95	.0001	8
To share my skill and knowledge with others	3.16	2.41 <sup>a</sup>	2.96 <sup>b</sup>	3.58 <sup>c</sup>	3.83 <sup>c</sup>	3.93 <sup>c</sup>	37.59	.0001	7
To use my equipment	2.74	2.15 <sup>a</sup>	2.46 <sup>b</sup>	3.01 <sup>c</sup>	3.72 <sup>d</sup>	3.53 <sup>d</sup>	40.64	.0001	9
To collect interesting artifacts	2.56	2.17 <sup>a</sup>	2.59 <sup>b</sup>	2.78 <sup>b</sup>	2.64 <sup>b</sup>	2.76 <sup>b</sup>	7.42	.0001	4
To help keep me physically fit	2.38	2.10 <sup>a</sup>	2.17 <sup>a</sup>	2.62 <sup>b</sup>	2.52 <sup>ab</sup>	3.13 <sup>c</sup>	11.95	.0001	5
To do something creative, such as take pictures or videos	2.76	2.41 <sup>a</sup>	2.72 <sup>b</sup>	2.89 <sup>b</sup>	2.94 <sup>b</sup>	3.33 <sup>c</sup>	8.60	.0001	5
	2.74	2.49 <sup>a</sup>	2.61 <sup>a</sup>	2.87 <sup>ab</sup>	3.09 <sup>b</sup>	3.13 <sup>ab</sup>	5.53	.001	4
<b>FACTOR 3: ESCAPE</b>									
For relaxation	3.27	3.05 <sup>a</sup>	3.27 <sup>b</sup>	3.38 <sup>b</sup>	3.27 <sup>ab</sup>	3.57 <sup>b</sup>	5.77	.0001	3
For a change from everyday life	3.58	3.17 <sup>a</sup>	3.61 <sup>b</sup>	3.76 <sup>b</sup>	3.75 <sup>b</sup>	3.82 <sup>b</sup>	8.93	.0001	4
To experience peace and tranquility	3.36	3.23	3.41	3.42	3.13	3.63	2.31	.06	n.s.
To meet new people	3.38	3.17 <sup>a</sup>	3.36 <sup>ab</sup>	3.46 <sup>ab</sup>	3.49 <sup>ab</sup>	3.73 <sup>b</sup>	2.84	.05	1
	2.76	2.60 <sup>a</sup>	2.72 <sup>ab</sup>	2.86 <sup>ab</sup>	2.69 <sup>ab</sup>	3.11 <sup>b</sup>	2.67	.05	1
<b>FACTOR 4: LEARN</b>									
To learn more about the underwater environment	3.54	3.42 <sup>a</sup>	3.50 <sup>ab</sup>	3.64 <sup>b</sup>	3.65 <sup>ab</sup>	3.59 <sup>ab</sup>	2.88	.05	1
To look at underwater animal and plant life	3.72	3.63	3.65	3.80	3.75	3.89	1.32	.26	n.s.
To study underwater geological formations	4.18	4.20	4.21	4.21	4.04	4.02	1.08	.36	n.s.
To develop my diving skills and abilities	2.65	2.40 <sup>a</sup>	2.58 <sup>ab</sup>	2.79 <sup>b</sup>	2.99 <sup>b</sup>	2.80 <sup>ab</sup>	4.48	.001	2
	3.60	3.42 <sup>a</sup>	3.54 <sup>ab</sup>	3.74 <sup>b</sup>	3.81 <sup>b</sup>	3.64 <sup>ab</sup>	3.84	.01	2
<b>FACTOR 5: ADVENTURE</b>									
For the adventure of it	3.92	3.74 <sup>a</sup>	3.92 <sup>ab</sup>	4.03 <sup>b</sup>	4.00 <sup>ab</sup>	3.92 <sup>ab</sup>	4.47	.001	1
To explore things	3.86	3.75	3.87	3.97	3.91	3.69	1.96	.10	n.s.
Because it is stimulating and exciting	4.13	3.87 <sup>a</sup>	4.10 <sup>b</sup>	4.26 <sup>b</sup>	4.35 <sup>b</sup>	4.30 <sup>b</sup>	9.30	.0001	4
	3.77	3.61	3.80	3.87	3.75	3.76	1.84	.12	n.s.
<b>FACTOR 6: SOCIAL INTERACTION</b> (So I could do things with my friends and/or family)	2.96	2.93 <sup>ab</sup>	3.12 <sup>a</sup>	2.92 <sup>ab</sup>	2.62 <sup>b</sup>	3.00 <sup>ab</sup>	2.49	.05	1

Means with different superscripts are significantly different (see p-level). Values are mean scores on a 5-point scale ranging from not important (1) to extremely important (5).

Within the *personal challenge* factor, the individual items related to challenge and confidence did not vary significantly by level of development; all divers tended to rate these two motives around 2.9 on the 5-point importance scale. *To show myself that I can do it* was actually the most discriminating item. However, the pattern of mean scores for all items harboring significant differences was exactly opposite of what was predicted: the scores tended to actually decrease from beginner to expert stages and increase again for post-experts (see Figure 2a).

In the *stature* factor, all items produced a significant F-value, with sharing skill and viewing shipwrecks as the most discriminating individual items. However, once again, the pattern was unexpected. Instead of decreasing, mean scores tended to increase linearly from beginners to post-experts. (See Figure 2b.)

For the *escape* factor, all divers tended to seek change from everyday life regardless of developmental level. Relaxation was the most telling item within the factor, showing four differences among levels of development. As shown in Figure 2c, the general trend of mean scores was, once again, not what was predicted.

Learning was valued relatively equally among all levels of development. All divers want to look at and learn about the underwater environment. For the remaining items that did have significant F-values, a pattern finally emerged resembling what was hypothesized for the intrinsically motivating *learn* factor: beginners sought to *study underwater geological formations* and to *develop their diving skills and abilities* to a lesser degree than either advanced or expert divers (Figure 2d).

The same could be said for the *adventure* factor. Here, exploration was the deciding item in this factor, uncovering four significant differences. Although not strong, the predicted pattern for this intrinsically motivating theme was somewhat evident (Figure 2e), with beginners having significantly lower scores than all other levels of divers.

Only one significant difference was detected for the *social interaction* item, and the trend displayed by the data followed the predicted pattern of being least important for experts. (See Figure 2f.)

### Conclusions and Implications

First, this study showed that diver motivations do differ by level of development, but not always as expected. The study verified that divers with higher levels of development are motivated to pursue the activity for different reasons, placing more importance on *adventure*, *learning*, *stature*, and *escape* and less importance on *social interaction* and *personal challenge*. All six factors had significant F-values, and examination of each of the 24 individual motives revealed that 17 items differed by level of development. Generally, beginners stood out from the rest, scoring significantly lower than other divers for all themes except those related to *personal challenge*.

Trends in the data showed that the hypothesis was supported direction-wise in only half of the cases. *Adventure* and *learning* followed the predicted curvilinear pattern of increasing importance from beginners to experts and decreasing for post-experts. The extrinsic *social interaction* motivation displayed the predicted mirror image of that curve.

However, unexpectedly, internal *personal challenge* decreased, and external motives of *stature* and *escape* actually increased with development. Theory postulates that participants with more experience, skill, etc. will continue to seek out new challenges to peak their interest and commitment. (The risk element of *personal challenge* is one exception; as Ewert [1993] displayed, the importance of risk tends to decrease with experience.) When considering *stature*, however, the idea that leisure activity becomes more intrinsic with experience, or done for its own sake, was not supported. Even the one item in this factor that declined for post-experts was somewhat odd. Stebbins (1979, 1992) explained that post-experts move toward sharing with and teaching others as a way to stay involved in a leisure activity once they are in a stage of decline. One explanation for this anomaly may be that, since diving requires a very unique underwater environment, one must be able to physically do the activity in order to teach it, precluding some post-expert divers from sharing their knowledge.

Second, with the exception of the *personal challenge* factor, not all motives within a motive category or factor differ significantly by level of development. Specifically, individual motives related to challenge, confidence, change, looking at and learning about the environment, adventure, and excitement were rated similarly in importance by all divers, regardless of developmental stage.

In sum, it seems that diving is a unique type of leisure activity in terms of motivation. Beginners may initially be drawn to the activity to challenge themselves; however, once the skills and abilities are developed, divers seem to be motivated by the stature of the activity and the visible outcomes associated with it. Besides conflicting with the intrinsic nature of leisure theory, this also somewhat contradicts impressions given by focus group data. Many interviewees stressed that divers often hide the fact that they dive for fear that the public will label them as crazy risk seekers. Many divers, however, began diving with a generation inspired by the television show *Sea Hunt*; this group also heavily emphasized "trophy hunting" and collecting artifacts to display from their adventures, laying a strong foundation to explain the importance of the *stature* factor.

If it is known how motives differ by level of development, two groups in particular can make great use of that information. First, resource managers, tourism professionals, and community developers could use this information to facilitate planning and promotion of various dive sites, highlighting which outcomes would most likely be satisfied. Likewise, dive shops, clubs, and instructors could better facilitate participants' needs and experiences.

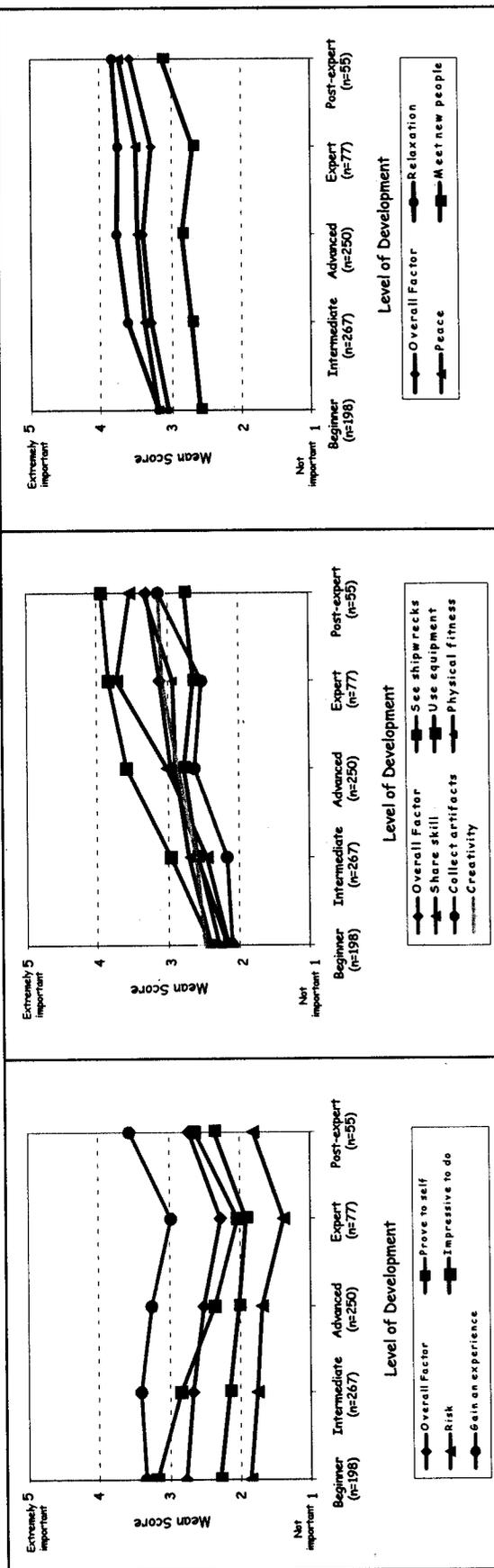


Figure 2a. Personal Challenge Factor by Level of Development

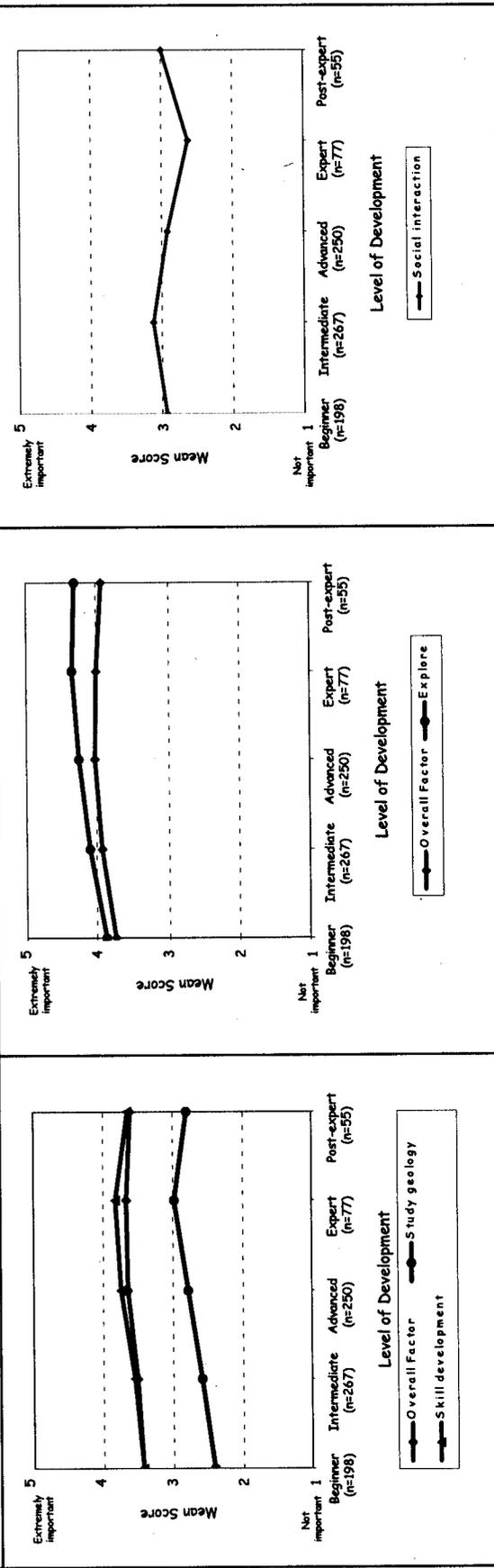


Figure 2b. Stature Factor by Level of Development

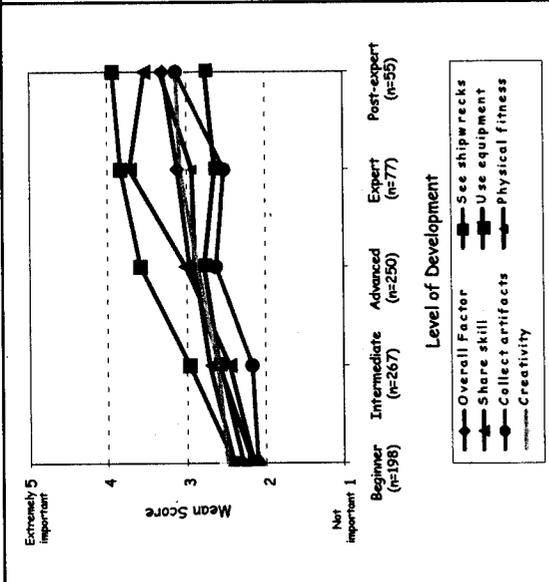


Figure 2c. Escape Factor by Level of Development

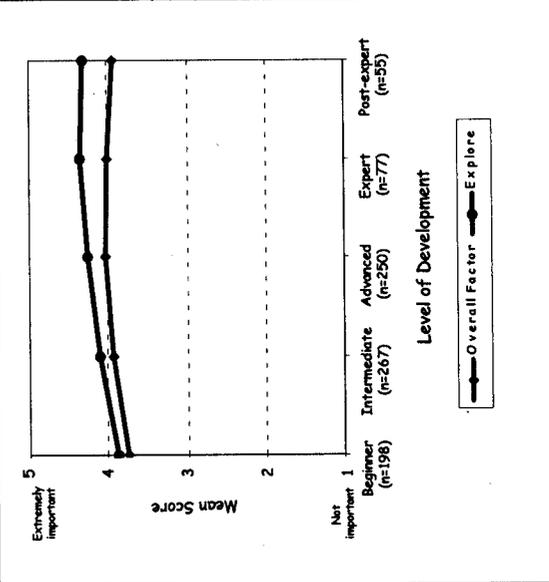


Figure 2d. Learn Factor by Level of Development

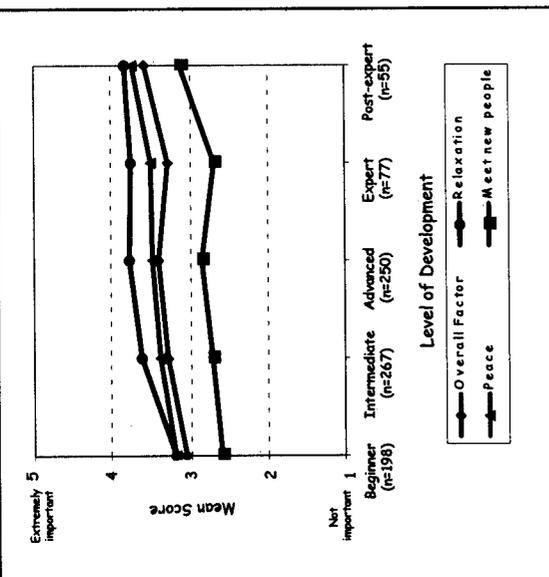


Figure 2e. Adventure Factor by Level of Development

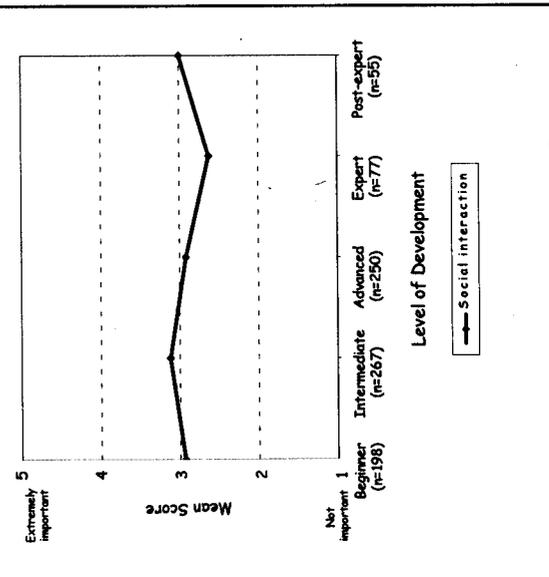


Figure 2f. Social Interaction Factor by Level of Development

From a research perspective, even more light could be shed on how motives change by linking that information to perceived constraints and discontinuance behavior. According to expectancy-value theory (Fishbein & Ajzen, 1975), being unsuccessful at negotiating constraints could affect one's belief about the likelihood of achieving desirable outcomes, in turn fostering a negative attitude and reduced intention to perform a specific behavior. Confirming this, Ewert (1993) found that novice climbers who failed to reach the summit consistently reported lower levels of importance for all motives.

Previous investigations showing significant differences in motives based on different levels of development have primarily focused on experience use history, with motives measured at one snapshot in time (e.g., Schreyer et al., 1984; Williams et al., 1990). Todd's study of quiltmakers (2001) is a rare example of following the same participants over time and using more than experience to indicate developmental level. Results showed that after four years, quiltmakers who had progressed to a higher level of development were able to keep their motives at a consistent level, relying significantly less on quilting to help them work through grief or problems. Quiltmakers who stayed at the same level or even regressed, however, seemed to have significantly less "drive" and "control" in their lives.

Longitudinal studies of divers would enable investigators to overcome the most serious limitation of this cross-sectional study: determining whether divers' motives actually change over time. Such studies could contribute to understanding the link between internal cognitive states (attitudes, feelings, and motives) and leisure behavior.

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## **SKIER MOTIVATIONS: DO THEY CHANGE OVER TIME?**

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**Abstract:** Skiing has been declining in participation over the last decade. This study examines motivations pre-trip and post-trip to see if the motivations for participation in an international ski vacation change over time. Results revealed significant differences among: to view scenery, to rest and relax, to fulfill responsibilities to my family, to take it easy, to spend more time with my family, to meet new people and socialize, to be close to nature, to feel good after being physically active, and to meet interesting people. Two of the motivations were found to be significant at the .01 level. These motivations were: to socialize with others, and to engage in activities that require considerable skill.

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### **Introduction**

In 1994-95, approximately 16.8 million people participated in downhill skiing. According to the USDA Forest Service (Wellner, 1997), 4% of all pleasure trips in the U.S. in 1995 including skiing. "Eight percent of Americans aged 16 or older have been downhill skiing at least once in the past 12 months, making it the second most popular winter sport after sledding" (Wellner, 1997, p. 253).

Although skiing enjoys a substantial amount of participation, in recent years skiing has been experiencing decline. In fact, participation has declined from 11.0 million in 1989 to 7.4 million in 1999 (National Sporting Goods Association, 2000). Several reasons have been suggested for this decline. One reason is that the industry competes with other vacation options, like Disney World and Europe (Wellner, 1997). Additionally, skiing is an expensive sport and the "cost is keeping people away" (Leocha, 1997). Finally, skiing has been suggested to be a high impact sport and with an "aging" population, perhaps skiing has already started to recognize the inevitable decline.

One area of the research, which may help to understand this decline in skiing participation, is the study of motivations. Tourism motivations have been studied since the early 1950s. In recent years, there has been criticism regarding some of the research involving motivations. Pearce (1993) has one of the main criticisms. He suggests that too much of the motivation's research provides only a snapshot in time and ignores the fact that motivations can

be dynamic. The major problem with studies that do not include change is that the results are less meaningful and applicable.

One theory that addresses this concern is Parasuraman, Berry and Zeithaml's (1988) gap analysis. This theory suggests that people's motivations can be dynamic and change over time. The theory posits the importance of gaps between perceptions of motivations and expectations. The SERQUAL scale (Parssuraman, Berry & Zeithaml, 1994; Parasuraman, Zeithaml & Berry, 1988) does not represent either a new or innovative technique to analysis; however, its results may contribute to explanations of vacations behaviors and "subsequent assessments by tourists of their vacations" (Ryan & Glendon, 1998).

Research by Loundsbury and Hoopes (1988) is potentially important, for it was one of the first to examine the stability of motivations over time. Loundsbury and Hoopes (1988) used rankings of factors over a five-year period, including the factors taken from the Leisure Motivation Scale. They found that there was some "medium term consistency." Stability can be assessed in a number of ways, including, mean scores, rankings, and persistence of factor loadings. This study examined stability over time by assessing the mean scores and ranking of individual items over the two times. Factor loadings were not computed due to the low sample size.

### **Purpose of the Study**

The purpose of this pilot study was to investigate the stability of motivations for skiing over time. The study focused solely on one trip organized by a Southern United States ski club.

### **Methods**

This study used a convenience sample of members of a snow skiers club in the Southern United States traveling across to Europe on a ski vacation. A questionnaire was administered while in transit to the ski destination. One week after returning home, a follow-up questionnaire sent out. A total of 29 travelers filled out the initial survey out of a total of 42 people who were on the trip (2 of the travelers were the researchers and were excluded). One of the reasons for a lower response rate was that there were many couples on the trip and only one person per couple filled out the questionnaire rather than both parties. The follow-up study was completed by the entire 29 who filled out the original survey. Therefore, a 100% response rate was achieved for the post-trip questionnaire.

Motivations were derived from Manfredro, Driver and Tarrant's study (1996) "Measuring leisure motivation: a meta-analysis of the recreation experience scales. Twenty motivational statements were chosen representing six dimensions. Skiers were asked to indicate the level of importance of each motivation as a reason for participating. Each item was scored on a 5-point likert-scale, 1 meaning "not at all important" and 5 meaning "extremely important." The post-trip scale asked skiers to respond to

the level that each motivation was met. Each item was scored on a 5-point likert-scale, 1 meaning "strongly disagree" and 5 meaning "strongly agree." Mean scores were computed for the motivation statements (Table 1).

### Limitations

This study one major limitation, a relatively low sample size. Therefore, the results of this study cannot be considered representative of the entire ski club. Thus, it should be considered only as a pilot study that suggests hypotheses to be tested in future studies. One positive result was that the post-test was completed by 100% of the initial sample.

### Findings

Differences in motivations were examined by looking at pre-trip versus post-trip responses (Table 2). The findings indicate that the top five motivations for Ski travelers pre-trip were: to view the scenic beauty (4.05), to view scenery (4.00), to do exciting things (3.95), to feel good after being physically active (3.91), and to engage in sports activities (3.82). When asked about ski trip motivations after the trip, the responses changed slightly. The top five motivations for the ski travelers post-trip were: to view the scenic beauty (4.40), to view scenery (4.40), to do exciting

things (4.40), to feel exhilaration (4.30), and to feel good after being physically active (4.20). The least important motivations were to spend more time with my family, and to fulfill responsibilities to my family (pre-trip). Post-trip, the least important motivations were to be able to go out alone, and to bring my family closer together.

T-tests revealed that the changes in several motivations over time were significant at the .05 level. These motivations include: to view scenery, to rest and relax, to fulfill responsibilities to my family, to take it easy, to spend more time with my family, to meet new people and socialize, to be close to nature, to feel good after being physically active, and to meet interesting people. Two of the motivations were found to be significant at the .01 level. These motivations are: to socialize with others, and to engage in activities that require considerable skill.

Another motivation that changed over the time from pre-trip to post-trip was to feel exhilaration. The mean score for this attribute was 3.77 for the pre-trip responses, and 4.30 for the post-trip responses. Pre-trip, it was more important to feel good after being physically active and to engage in sports activities. Perhaps, after the trip, travelers label this 'feel good after being physically active' feeling as exhilaration.

**Table 1. Comparison of Pre-trip Motivations and Post-trip Motivations**

Attributes	Pre-trip <sup>a</sup> (N=29)		Post-trip <sup>a</sup> (n=29)	
	Mean	SD	Mean	SD
To view the scenic beauty	4.05	0.95	4.40	0.52
To view scenery	4.00	0.82	4.40	0.52
To do exciting things	3.95	0.90	4.40	0.70
To feel good after being physically active	3.91	0.87	4.20	0.42
To engage in sports activities	3.82	0.85	4.10	0.32
To participate in physical activities	3.77	0.81	3.90	0.57
To feel exhilaration	3.77	0.09	4.30	0.48
To get away from it all	3.68	1.13	4.20	0.79
To experience new challenges	3.68	0.89	3.90	0.57
To increase my knowledge of different cultures	3.64	1.09	4.10	0.32
To have thrills	3.45	1.01	3.80	0.92
To seek intellectual enrichment	3.36	1.09	3.60	1.17
To engage in activities that require considerable skill	3.23	0.92	4.10	0.32
To travel where I feel safe	3.18	1.22	3.30	0.82
To be close to nature	3.14	0.99	3.80	0.63
To seek an educational experience	3.09	1.19	3.60	0.84
To meet new people and socialize	3.09	1.11	3.80	0.63
To meet interesting people	3.09	1.19	3.70	0.82
To rest and relax	3.05	1.53	3.70	0.95
To take it easy	3.00	1.45	3.40	1.35
To socialize with others	2.91	1.06	4.00	0.94
To feel safe and secure	2.73	1.28	3.20	0.92
To vacation with my family	2.05	1.33	2.20	1.48
To be able to go out alone	2.05	1.13	2.10	0.88
To bring my family closer together	2.05	1.21	2.00	1.15
To spend more time with my family	1.95	1.25	2.20	1.23
To fulfill responsibilities to my family	1.55	1.10	2.30	1.25

<sup>a</sup> Mean values based on a 5 point Likert-type scale, ranging from 1=not at all important and 5=very important.

**Table 2. Paired Sample t-tests and Levels of Significance for Motivation Statements**

Attributes	t-test	sig.
To view scenery	-2.6	.02*
To rest and relax	-2.4	.03*
To fulfill responsibilities to my family	-2.8	.02*
To do exciting things	-1.0	.33
To socialize with others	-4.7	.00**
To feel safe and secure	-1.0	.34
To seek an educational experience	-1.7	.10
To view the scenic beauty	-1.5	.17
To take it easy	-2.7	.02*
To spend more time with my family	-2.3	.04*
To have thrills	-1.1	.28
To meet new people and socialize	-3.5	.01*
To travel where I feel safe	-0.8	.43
To be close to nature	-3.0	.01*
To feel good after being physically active	-2.3	.04*
To get away from it all	-1.7	.11
To vacation with my family	-1.7	.11
To increase my knowledge of different cultures	-0.9	.39
To engage in activities that require considerable skill	-4.7	.00**
To meet interesting people	-2.3	.04*
To be able to go out alone	-1.5	.16
To bring my family closer together	-1.4	.19
To experience new challenges	-2.6	.79
To participate in physical activities	-1.0	.34
To seek intellectual enrichment	.00	1.00
To engage in sports activities	-.56	.59
To feel exhilaration	-.59	.59

\* significant at the .05 level

\*\* significant at the .01 level

This data analysis revealed five motivation factors that have emerged. These five factors are: Nature, Social, Family, Rest and relaxation, and Physical. Each of these factors was measured using 2 or 3 statements. These five factors encompass the broad motivations that seem to be most important to ski travelers.

Overall, the motivations for ski travelers on this particular trip seemed to remain stable over time. Despite slight variances, the motivations generally remained stable, and showed that the scenery and the physical activity itself were the greatest motivators.

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# SOCIOCULTURAL PERSPECTIVES OF TRAPPING REVISITED: A COMPARATIVE ANALYSIS OF ACTIVITIES AND MOTIVES 1994 AND 2000

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**Abstract:** Vermont trappers are faced with multiple social, economic, and political factors that influence their harvest activities, the extent of their participation, and affect their motives for participating in trapping. The purpose of this study was to assess changes in participation and motives of Vermont trappers from 1994 to 2000. Data collected from 333 licensed Vermont trappers (63 % response rate) from a six state study of trappers in 1994 was compared to data obtained in a replicated study of 447 licensed Vermont trappers (69.8% response rate) in 2000. No differences were found between the two cohorts in participation in other types of natural resource harvesting activities other than trapping, age at which they began setting traps, general demographic data of the two cohorts, or in the income they received from trapping. A one way MANOVA used to examine the effect of year (2000 and 1994) on total days participating in trapping and total species of furbearers harvested indicated a significant effect ( $\Lambda(2, 636) = 21.031, p < .000$ ). Follow-up univariate ANOVAs indicated total days trapping, were significantly effected by year ( $F(1, 657) = 41.766, p < .000$ ), with those responding in 2000 expending about twice as much effort in days participating than those responding in 1994. A Principle Components analysis with varimax rotation was used to reduce the 25 motivation variables from each of the 1994 and 2000 responses to linear combinations of variables representing underlying dimensions of the motivations. An ocular examination of each of the five components selected for each of the two years used to compare motivation variables and factor loadings across the two cohorts (1994 and 2000) showed considerable consistency. The five components (factors) related to self-reliance, outdoor lifestyle activity, affiliation, wildlife control, and wildlife orientation. Trapping remains a central life interest by which people organize themselves, interact with each other and the natural environment, derive utilitarian satisfaction from the environment, and maintain a sense of autonomy from year to year. The varied

motivations of trappers indicate that policy makers and some wildlife managers must discontinue considering trappers as unithematic in why they trap, rather such policy makers must understand that implementation of policy initiatives may have varying effects on different groups of trappers. Future research needs to continue to monitor motivations and sociocultural aspects of trapping if it is to remain an effective wildlife management strategy and means to maintain lifestyle benefits for a specialized subgroup of society. Research also should address the effect of trapping on the development and maintenance of a sense of place.

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## Introduction

Over the past three decades, socioeconomic, demographic, and political changes have affected the traditional harvesting of furbearers. Changes in social values with regard to wildlife resources have spurred the animal rights movement, which in turn has resulted in a politicization that has been directed at, and sometimes successful at prohibiting various trapping devices used in the harvest of furbearers (Siemer, Batcheller, Glass, & Brown 1994). Habitat modification and destruction for some species has resulted from forest fragmentation and development; and the spread of disease among some wildlife populations has resulted in decreased harvests and hesitancy to target some species. Pelt prices in the early part of the past decade declined partly because of market forces, changes in fashion design, and changes in currency valuation.

Furbearer policy changes (e.g., ballot initiatives) are often developed and implemented without regard for their impact on the trappers who participate for a variety of social, commercial, recreational, and cultural motives (Daigle, Muth, Zwick, & Glass 1999). While the sociocultural aspects and politicization of furbearer harvesting has received attention in recent years (Mason 1990; Glass, More, & Distefano 1992; 1992; Siemer et al.; 1994, Daigle et al. 1999), further empirical research efforts need to focus on changes that may have over time in the motives, meanings, and threats to trapping. This research is especially important in light of the initiatives and referendums restricting trapping in states such as Massachusetts and Washington, and attempts to limit trapping in several states including Oregon and Vermont by bills introduced in the legislature. Likewise, pelt prices may affect trapping participation, causing some trappers to "stop out," until prices rise far enough to cover utility costs.

The purpose of this study is to assess the changes in participation and motivations of Vermont licensed trappers in two time frames of, 1994 and 2000. Since 1994, pelt prices (in constant dollars) have increased slightly for many furbearer species, whereas there was a twenty percent increase in the number of licensed trappers. Moreover, in late 1997 and early 1998 there was an organized attempt by animal rights groups opposed to trapping to lobby for the legislative restriction of certain types of traps. Changes in the cohort and the political climate of trapping may have concomitant changes in participation and underlying motivations of the cohort.

Our objectives were:

- To examine the changes in trapping participation, effort expended (as measured by the number of days spent trapping, and the actual harvest of a given species). As a result of a limited but positive economic incentive (i.e., increase in pelt prices since 1994), and a decrease in disease among some furbearer populations, we hypothesized that there would be an increase in both effort and corollary harvest from 1994 to 2000.
- To identify any changes in underlying motivations or motivational dimensions as a result of the changes in the cohort, land development, and economic and political climate since 1994.

### Methods

The 1994 data were based on a comprehensive six-state study, by state, of the sociocultural and economic aspects of trapping, which included 333 usable questionnaires (63 percent response rate) from Vermont (Daigle et al., 1999). Using the Total Design Method (Dillman, 1983), a replication of the 1994 questionnaire was mailed to a census sample of 682 licensed trappers in Vermont during the spring of 2000. A response rate of 69.8 percent (447 responses) was received from the 640 deliverable questionnaires after three waves of the survey. No sampling of non-respondents was undertaken because of the relatively high response rate.

The 18-page questionnaire booklet queried prospective respondents about their socialization into trapping, extent of participation, species targeted and harvested, trap types owned and used, economic aspects of trapping, use of other renewable resources, motivations for trapping and for possibly leaving trapping, and demographic information on trappers and their households. In addition, questions were included from a 1989 study (Glass et al., 1992) regarding estimates of opposition to trapping, and a series of questions about traps owned, used, modified, and employed for selected species.

Replicated data on the sample profile, extent of participation, and motivations from the 2000 study sample was compared to the data collected in 1994 to assess changes in the Vermont trapper cohort.

### Results

Background literature suggests that people who trap are introduced to this activity at an early age, that family and friends act as the major agents of socialization, and that they are often involved in corollary natural resource harvesting activities (Muth, Zwick, Daigle, Glass, & Jonker, 1996). The mean age which Vermont trappers began setting traps was 15.9 in 1994 and 17.1 for those responding in 2000 ( $t = 1.801$ ,  $p = .072$ ). Friends or neighbors were the primary agent of socialization in both 1994 (53.8% were introduced to trapping by friends or neighbors) and 2000, sixty-four percent were introduced to trapping by friends or neighbors ( $\chi^2 = .552$ ,  $p = .006$ ).

There was no significant difference in the percentage who participated in other harvesting activities (see Table 1).

**Table 1. Wildlife Harvesting Activities in which Trappers Participated, Vermont 1994 and 2000**

Activity	2000 % Participation	1994 % Participation
Hunt deer	95.7	95.4
Hunt other big game	60.1	56.6
Hunt small game	83.3	81.7
Hunt upland birds	86.2	85.5
Hunt waterfowl	29.9	34.5
Fresh water fish	92.6	94.5
Salt water fish	23.8	20.3

Trappers from both study years were primarily male, two-thirds had a high school education, and almost nine of ten trappers grew up in a rural area (see Table 2).

**Table 2. Trapper Characteristics**

Characteristic	2000	1994
Gender (Males)	95.7%	95.4%
Educational Achievement		
Completed high school	66.2%	63.6%
Received college degree	13.6%	14.6%
Grew up (community type)		
Rural area	89.5%	88.8%
Suburban area	7.5%	8.1%
Urban area	2.9%	3.1%

Over 90 percent of trappers from both 1994 and 2000, trapped seven days a week, did so primarily on private lands which were owned by others than themselves or relatives (90.7% of 2000 respondents and 86.5% of those responding in 1994). They differed by year in where they trapped only in terms of lands owned by relatives, 51.3% of those responding in 2000 reported trapping on land owned by relatives compared to 36.3% of those who responded in 1994 ( $\chi^2_{df=1} = 15.220$ ,  $p = .000$ ).

Trappers also reported trapping on State owned land (58.4% in 2000, 55.3% in 1994), Federal lands (29.4% in 2000 compared to 23.7% in 1994), and other lands (8.3% by 2000 respondents and 5.9% by 1994 respondents). (See Figure 1.) The increase in state and federal land holdings (e.g., there was the establishment of a 26,000 acre National Wildlife Refuge) may account for the increased percent of respondents trapping on these lands.

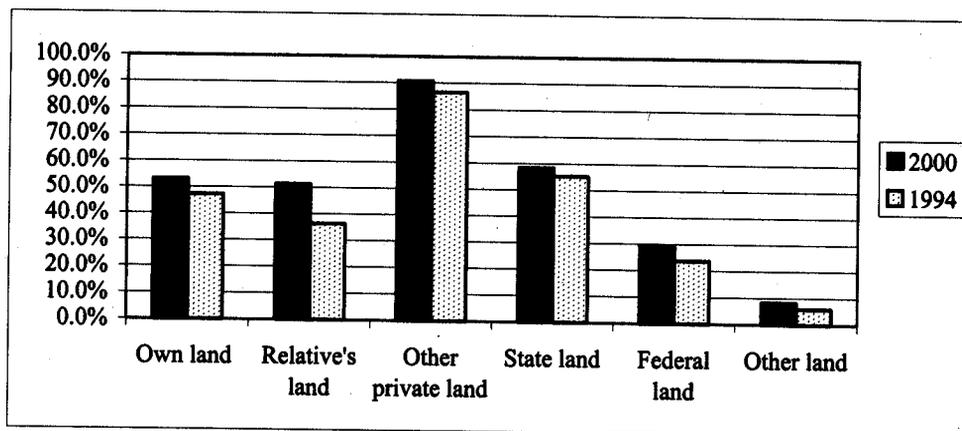


Figure 1. Ownership of Lands that Trappers Utilize

There was no significant difference between the two respondent groups in their mean income earned from trapping. In 1994 respondents earned an average of \$234.01, respondents from 2000 averaged \$271.15.

A modest increase in pelt prices since 1994, coupled with a resurgence of trappers purchasing licenses in Vermont suggested that trapping is increasing. We hypothesized that both the number of animals harvested and trapper's total effort (in days participating in trapping related activities) would vary by the year of harvest.

A one way MANOVA was calculated to examine the effect of year (2000 and 1994) on total days participating in trapping and total species of furbearers harvested (see Table 3). A significant effect was found ( $\Lambda(2, 636) = 21.031, p < .000$ ). Follow-up univariate ANOVAs indicate that total animals harvested were not significantly effected by year trapping ( $F(1, 657) = 1.962, p > .05$ ). Total days trapping, however, were significantly effected by year ( $F(1, 657) = 41.766, p < .000$ ).

One of the objectives of this study was to compare the sociocultural and economic motivations for trapping in 2000 with those of 1994 (Daigle et al., 1999). Motivations for trapping were assessed by 25 Likert type questions requesting that the respondent rate how important each item

be to them as a reason for trapping. The items were scored from 1, "Not at all important," to 5, "Very important."

A Principle Components analysis with varimax rotation was used to reduce the 25 variables from each of the 1994 and 2000 responses to linear combinations of variables representing underlying dimensions of the motivations. The number of components was determined by eigenvalues  $> 1$ , an examination of a scree plot for each year, and interpretability of the components (factors). Factor loading greater than .500 were used to interpret the components. Cronbach's alpha was used to assess the reliability of the motivation variables used to interpret the components.

A five component (factor) solution was selected as the best for each of the years. An ocular examination of each of the components was used to compare motivation variables and factor loadings across the two cohorts (1994 and 2000).

The first (or strongest) component of 1994 "loaded" on motivations related to self reliance and self sufficiency, this was similar to the third component of the 2000 sample. For example, in 1994, this component or factor was found to be related (or loaded) on the motivations of: "for the opportunity to be my own boss," "to maintain a sense of self reliance," "to do something exciting or challenging," "to feel my independence," and "to demonstrate or test my

Table 3. Days Trapping and Species Harvested by Year (MANOVA Analysis)

Year	Mean	Std Dev.	F	Sig.
<b>Total days trapping</b>				
2000	64.05	56.66	41.766	.000
1994	39.20	37.36		
<b>Total species harvested</b>				
2000	81.72	187.45	1.962	.162
1994	64.93	93.14		

skills and abilities." For the sample of trappers from the year 2000, their third strongest component (or factor) was defined by three of these same motivations, but also included the motivation "to provide income for myself and my family." Subsequently this component was labeled as "Self Reliant," because of the commonality of motivations between the two years (Table 4).

The second component from 1994, and first (or strongest) component of 2000, were defined by motivations related to the fun and pleasure of trapping, lifestyle, and traditions associated with trapping. This component was labeled as a "Outdoor Lifestyle Activity," component (Table 5).

Affiliate motivations define the third component of 2000 and the second component of the 1994 samples. This third component that they have in common was labeled "Affiliation" (Table 6).

The fourth component was defined as a "Wildlife Control" motivation component. The motivations most strongly related to the factor were related to controlling vermin or predator populations, removing nuisance animals-which are often a service of wildlife control for other landowners such as farmers, and to keep diseases such as rabies and canine mange in check (see Table 7).

The fifth component for both 1994 and 2000 sample respondents "loaded" on two motivations typically related to non-consumptive aspects of wildlife related activity. The component was labeled as a "Wildlife Orientation" (Table 8).

The ocular examination revealed similar linear structure of motivation sub-dimensions for both 1994 and 2000, suggesting similarity in motivation structure between the two years, and the dimensions had similar scale reliability for each year. As many of the trappers from 1994 (about 80%) also were included in the 2000 sample the stability of motivations is not unexpected. Similar to other studies of recreation motivations this study seems to confirm the relative stability of motivations for participation.

### Implications

- Throughout the recorded history of North America, trapping has been one of the major factors associated with the management and harvest of wildlife resources. Participation has traditionally fluctuated with the cycles in pelt prices, over-trapping of furbearers, available time, personal health, and access. These latter three factors appear to be affecting the current cohorts being examined in this study.
- Effort expended at trapping is a better indicator of the extent of trapping than just sheer numbers of trappers purchasing licenses. Effort (i.e., days trapping) increased by over 63 percent from 1994 to 2000, while trapper number increased by 20 percent.
- Trapping remains as a serious avocation for a group of participants who trap primarily as a valued component of an outdoor lifestyle, maintaining tradition and a utilitarian outdoor activity.

- The independence, challenge and self-reliance aspect of trapping, combined with its utility, may have few, if any, substitutes in terms of activities. Trappers spend an average of one fifth of their year engaged in trapping and related activities (e.g., scouting for animals, talking with land owners, tuning equipment), with a hardcore of five-percent reporting they spent over half their year in trapping activities. Trapping requires an intensity and commitment, ninety percent engage in the activity both weekends and weekdays as traps, by law, have to be checked every 24 hours. While many trappers hunt and fish, such activities appear to be a corollary activity bundle rather than a substitution, lacking the intensity participants associate with trapping.
- Socialization and affiliation are seen as a component of trapping for many, approximately 56 percent were members of trapper organizations in both 1994 and 2000. The motivations and a subsequent k-means cluster analysis indicate that a sizable number of trappers clearly are engaged in interacting with other trappers, maintaining relationships with landowners, sharing their experiences with family and friends, and sharing skills and knowledge with others. As this affiliative component may be important for establishing a community of meaning, policy implementation that eliminates or severely restricts this activity may result in undesirable effects on maintenance of social networks.
- Trappers see themselves as providing a valuable animal management function by proactively lowering animal population levels, and assisting in nuisance animal problems. They also are motivated by these animal control aspects, in some cases for self-reliance reasons and for others as a means for maintaining ties with landowners to assure access.
- This study indicates that trapping remains a central life interest by which people organize themselves, interact with each other, derive utilitarian satisfaction from the environment, and maintain a sense of autonomy from year to year; and that generally motivations have remained stable. Future research needs to continue to monitor these motivations and sociocultural aspects of trapping, examining the patterns in trapping participation in relation to cycles in pelt prices, substitutable activities, and perceived threats to trapping that may effect subgroups of trappers or the trapping community as a whole.
- The alternative to this utilitarian resource based system is a reactive nuisance animal approach which results in increased animal damage complaints and a loss of lifestyle benefits by this segment of the society who traps.

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**Table 4. Self-reliant**

Motivation	Component Loadings	
	1994	2000
Provide income for myself and family	.261	.589
Opportunity to be my own boss	.700	.766
Maintain a sense of self reliance	.762	.672
Do something exciting or challenging	.625	.320
Feel independence	.800	.707
Demonstrate skills and abilities	.658	.469
Cronbach's Alpha	.8366	.7576

**Table 5. Outdoor Lifestyle Activity**

Motivation	Component Loadings	
	1994	2000
Remain in touch with heritage of trapping	.556	.643
Feel like a part of nature	.484	.507
Maintain rural tradition	.553	.602
Continue important part of my lifestyle	.729	.737
Participate in a favorite outdoor activity	.836	.784
Experience fun and pleasure of trapping	.745	.744
Cronbach's Alpha	.8159	.8525

**Table 6. Affiliation**

Motivation	Component Loadings	
	1994	2000
Share experiences with friends	.744	.726
Share my skills and knowledge with others	.794	.748
Share experiences with my family	.658	.733
Interact with other trappers	.727	.541
Cronbach's Alpha	.7817	.7729

**Table 7. Wildlife Control**

Motivation	Component Loadings	
	1994	2000
Control predator or vermin populations	.846	.814
Remove nuisance or problem animals	.771	.790
Keep diseases from spreading	.712	.743
Provide a valuable service to landowners	.651	.660
Cronbach's Alpha	.7993	.8155

**Table 8. Wildlife Orientation**

Motivation	Component Loadings	
	1994	2000
Observe wildlife	.728	.886
Learn about wildlife	.697	.889
Cronbach's Alpha	.8572	.9414

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# **Resource Management & International Tourism Development**

## THE IMPACT OF POTENTIAL POLITICAL SECURITY LEVEL ON INTERNATIONAL TOURISM

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**Abstract:** The purpose of this study was to investigate the impact of potential political security in an effort to fill in two foregoing research gaps in international tourism. To investigate the relationship between political security and international tourism, a simple regression model was employed. Secondary data were collected from a variety of sources, such as international tourist arrivals (130 countries) from Statistical Yearbook of Tourism by World Tourism Organization and their political security index from Euromoney aggregated by polling risk analysts, risk brokers and bank credit officers. The result found that the regression coefficient of political security turned out to be statistically insignificant ( $p=0.23$ ). Only 9 % of total variance in international tourist arrivals is explained by the political security. However, according to the scatter plot, the outlier clusters of 18 underestimated countries and 5 overestimated countries revealed important patterns explained in terms of the political security.

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### Introduction

The impact of political security on international tourism has been the concern of some researchers (Lea, 1996; Wall, 1996; Bar-On, 1996; Mansfeld, 1999). It is commonly assumed that international tourists consider their personal safety along with travel costs and availability of information when they choose an international destination. The studies indicated that a nation's political insecurity led to a decrease in the number of international tourist arrivals. Two limitations were observed in these studies. First is that only small number of countries was used for the studies. Secondly, the meaning of political security was applied in a sense of the extreme case expressed by terrorism and international wars. The purpose of this paper, therefore, is to close two research gaps: applying global distribution of international tourists, and investigating the impact of potential political security, which is defined as political instability and perceived threat to tourist safety on international tourism.

### Data and Model

Data were obtained from two sources. International tourist arrivals were obtained from the Statistical Yearbook of

Tourism published by World Tourism Organization. Data for political security were obtained from Euromoney distributed by Euromoney. A political security index was made by polling risk analysts, risk brokers and bank credit officers. They were asked to give each country a score between 10 and zero. A score of 10 indicated no risk of non-payment, meaning no political risk; zero indicated that there was no chance of payments being made, meaning heavy political risk (Euromoney, 1997). A total of 150 countries, which were successful in reporting both number of international tourists arrivals and political security index, was used for the analysis. To investigate the relationship between political security and international tourism, a simple regression model was employed as follows:

$$1) Y = \alpha + \beta X_i$$

Where  $Y$  is growth rate of international tourist arrivals (94 – 97)

$X_i$  is change rate of political security index (94 – 97)

$\alpha$  is a constant

$\beta$  is  $X_i$  regression coefficient

### Result

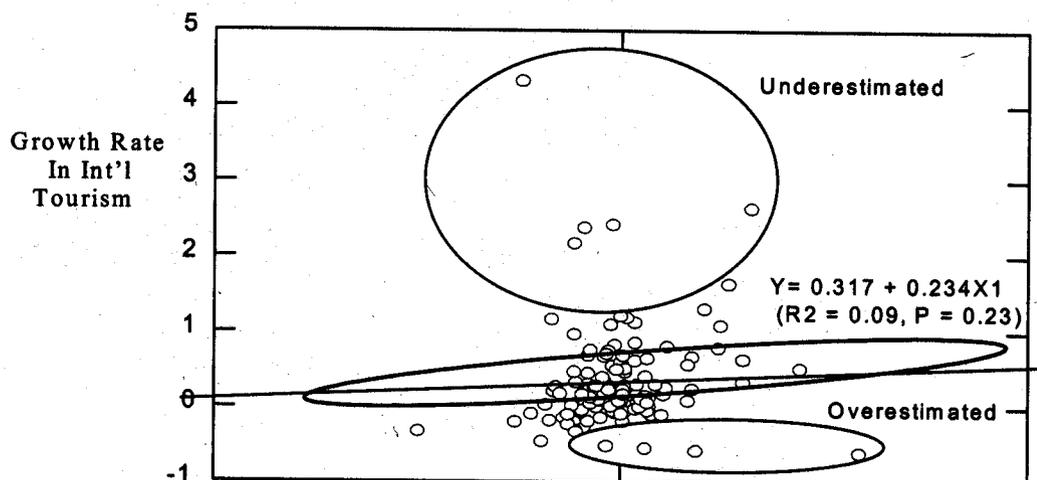
The results found that firstly, potential political security had no impact on the flow of international tourist arrivals. The regression coefficient of the political security turned out statistically insignificant ( $p=0.23$ ). Secondly, the political security only accounts for 9% of variance of international tourists arrivals (R-Square = 0.09). However, the scatter plot shows the patterns of the cluster of underestimated countries and overestimated countries, which decrease the goodness of fit in the regression line.

To identify the outliers countries, the standardized residual of the regression coefficients were transformed into Z scores. Upper 10 percentile, which represents underestimated countries, and lower 10 percentile, which represents overestimated countries, were extracted. With exclusion of 6 outliers countries, the model increased the explanatory power by 15% (R-Square 1.49). Also political security turned out to be a statistically significant variable in explaining the flow of international tourists.

$$\text{International Tourist Arrivals} = 0.212 + 0.503 (\text{Political Security Index}) \\ (t=4.79)$$

However, some need for explanation remains. Since data used for the study are actual numbers reported from each country, we could not easily set aside these countries as outliers. On the assumption that countries report accurate number of international tourist arrivals to the WTO, these countries should be considered as a unique set or cluster, which reveals the complexity for the nature of international tourists' response to political security, rather than statistical outliers.

## The Impact of Political Security on International Tourism



**Figure 1. Change Rate in Political Security**

Overestimated Countries	Underestimated Countries
Chad(-1.61), Sao Tome(-1.95),	Cuba (3.44), Mali(3.55), Nigeria(3.12), Sudan(6.75),

Note: Underestimated countries are those which have increases in the Number of International Tourist Arrivals in spite of decreases in Political Security Index. Overestimated countries are explained as countries which have decreases in the Number of International Tourist Arrivals but increase in Political Security Index.

### Conclusion

Does political security really matter to international tourism? The potential political security of the countries has a positive function of international tourist arrivals among 144 countries, which were apparently significant number of the countries. However considering 6 countries are not properly estimated by political security, brought ambiguous response. Since the political security in the study refers to a degree of "potential political risk" existing in the countries, international tourists might have acceptable tolerance of political insecurity in a case where the attractiveness of the destination is greater than political insecurity. Second, the number of international tourist arrivals could have a different meaning in relation to the potential political risk. For example, pleasure travelers and business travelers would be different in their sensitivity to the political risk than business traveler does. Therefore, the specification of international tourist arrivals would help decrease the ambiguity. In spite of the partial interpretation, the discussion of Hall and O'Sullivan (1996) provides insight into this complicated phenomena: "The sheer scope of the implication of political violence for tourism requires a far more sophisticated understanding of the nature of the international traveler's response to political instability and perceived threats to tourist safety than has hitherto been the case" (Hall and O'Sullivan, 1996, p. 118). The potential political risk of the countries is not always a constraint of

international tourists to overseas. It is well documented that the temporary impact of terrorism, international war, or civil war is significant factors that can dramatically decrease the number of international tourists (Lea, 1996; Ioannides, 1999; Wall, 1996; Bar-On, 1996; Mansfeld, 1999).

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## **FUTURE OF THE KOREA NATIONAL PARKS: A PRELIMINARY DELPHI STUDY OF KEY EXPERTS**

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**Abstract:** A preliminary Delphi survey of a panel of key experts who are very knowledgeable of Korean national parks was conducted between February and March in 2001. Park professionals, environmental NGO directors, interested citizens, and retirees identified issues facing the Korean park system (Wave 1). Findings from wave 1 of the survey provided the baseline for a series of Delphi waves in order to assess the future roles of the Korean national park system in protecting biodiversity and promoting tourism.

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### **Introduction**

Stated as preservation and use, the relationship between the threats to national parks and the potential resolutions of these threats are intertwined. Thus, identifying what are the threats to national parks and what can be done about them are critical questions (Machlis and Tichnell, 1985). Every national park system faces the dilemma of managing for long-term preservation of its assets and the short-term economic benefits of park use and tourism. Both the long- and short-term needs are vital for the nation; yet park systems are expected to resolve these national priorities with severely limited staffs and budgets.

This paper reports on the first part of a Delphi survey, which will suggest a model to help park professionals carry out the objectives of the Korean National Parks Authority (KNPA). More than three decades ago, Ruhle (1968) suggested a future Korean national park system should have clear master plans stating the significance of each area and listing its outstanding features. Such plans should specify the policy to be followed, the objectives to be pursued, and an outline for orderly development. Each potential national park area should be considered and plotted as an individual unit, thus avoiding a monotonous repetition, which might threaten Koreans' feelings of uniqueness. However, his most critical recommendation was that the national parks should be administered on a national level. For instance, if a forestry bureau were to be charged with the administration of such areas, it might include the desire to harvest timber, regardless of the degree of care and skill. Therefore, the care of the national parks should be vested in a ministerial or other high government rank that would have the greatest understanding and sympathy for park standards and goals. The agency should have the authority and means for sound administration (Ruhle, 1968).

Currently, there are 20 national parks in Korean national park system. As in all park systems, insufficient money and time for park management reflect the major current threats, along with over-development to the system. The status of KNPA is a trustee organization under the auspices of Ministry of Environment, thus employees of the KNPA are non-governmental. The system suffers from an inconsistency of relevant laws. Another unique attribute of Korean parks is their landownership (43% of total park lands are owned by private owners or Buddhist temples that are located in major park areas).

### **Methodology**

In order to develop a likely array of future directions for Korean national parks over the next decade, a panel of knowledgeable experts on the system was asked for their forecasts based on current and past trends in park management, philosophy, legislation, public attitudes, and funding. The Delphi technique offers a way to systematically combine expert knowledge and opinion to reach an informed group consensus about the likely occurrence of future events (Moeller & Shafer, 1989). The assumption of this method is that although the future is uncertain, individuals able to make informed judgments about future contingencies can approximate probabilities of the future. The method is intended to provide a general perspective on the future rather than a sharp picture. It replaces direct open debate with an iterative series of questionnaires, with each subsequent series of questionnaires containing information gathered from those preceding it. Borrowing from Moeller' and Shafer's explanation, the steps of the method consist of (1) identifying the relevant event -- in this study, problems of park management in Korea, (2) preparing clear and precise statements, (3) selecting panelists from the area of expertise suggested by the problem, and (4) mailing questionnaires in at least two waves. Other rounds may be necessary until a consensus begins to emerge.

In this preliminary phase, a panel of 36 Korean park professionals, retirees, interested citizens, and environmental NGO directors was requested to identify current major problems the Korean parks face. The panel members were selected by two different procedures: first 27 members were chosen through a literature review, a list consisting of 90 park professionals provided by Korea National Parks Authority (KNPA), an expert's recommendation on the KNPA list and supplementary list, a Ministry of Environment's recommended list, and two NGO groups' supplementary lists. In addition, 9 more members were added to the panel after the first 27 members recommended them as panelists.

### **Preliminary Findings**

In the wave one, 18 out of 36 members responded. The mean familiarity score of this group is 3.94, on the 5 point Likert scale, where 5 is "extremely familiar" with the Korean park system (Figure 1).

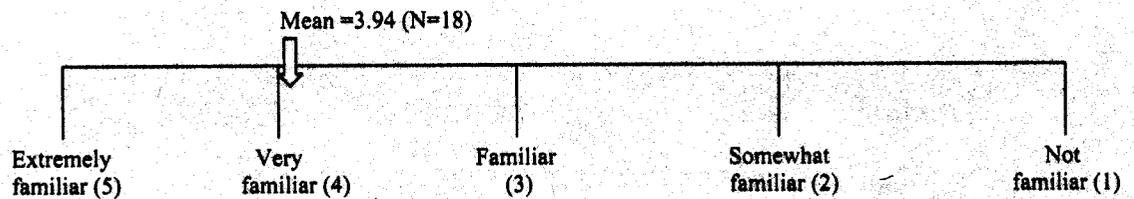


Figure 1. Respondents' Familiarity with the Korean Park System/Management/Policy

Table 1 shows the issues identified by the respondents. These 47 major issues are organized into 3 clusters: park philosophy/policy, park organization/management, and park visitation/visitor needs.

#### Further Study

In further waves, follow-ups on their converging and diverging opinions will be used in an attempt to develop consensus on what is likely to happen, what should happen, and what facilitating measures need to be taken to ensure a viable park system during the first decade of the new millennium. Finally, the panel's recommendations will be compared with the evolution of other national parks systems from selected nations in Asia and North and Central America.

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**Table 1. Identified Issues by the Panel**

<b>PROBLEMS DESCRIBED</b>
<b>Park Philosophy/Policy</b>
The Korea National Parks Authority and the central government's lack of national park idea
Conflict between preservation and use
Paradigm shift (need to consider national parks as preservation/educational places)
Land ownership (unlike the U.S. & Canadian park systems, 20% of Korean parks are private land)
Management control over parks (possibility of conflict between central and local governments)
In order to emphasize conservation, need of amending "natural parks law"
Inconsistent management system in KNPA (due to rapid turn-over of officials in Min. Of Environment)
Inconsistency/overlap of relevant laws
Need to establish state-run "national park bureau"
Organizational inflexibility of KNPA
Need to reclassify national parks on the basis of preservation/ecosystem values involved
Lack of policy regarding cultural resources such as eco-villages and Buddhist temples
Development pressure/ attempts in park area
Attempt of building cable car system in park area
Lack of inventory (ecosystem, infrastructure, etc)
Increased degradation of resources in park area/visitor impacts on natural environment
Insufficient protection for ecosystem
Lack of central government active role on natural resources
Infringement on private property right in park area (which causes civil appeal)
Entrance fee including separate admission fee for cultural assets (buddhist temples)
Conflict with buddhist temples, which are located in major park areas
On-going construction/renovation in buddhist temples in park areas
<b>Park Organization/Management</b>
Under-budgeting
Lack of knpa control over its budget
Understaffing
Lack of expertise in knpa
Problem of political appointment of knpa chairman
Lack of standards in conservation
Inconsistent management of ecosystem
Knpa and central government's lack of understanding national park management
Lack of management direction/goals/objectives; lack of long-term view in management
Unlawful facilities in park area
Unplanned development and facility deterioration in "mass facility zone" in park area
Financial difficulty of business in "mass facility zone"
Problem of zoning
Poaching and illegal picking (due to lack of law enforcement)
<b>Park Visitation/Visitor Needs</b>
Lack of public relations/education on ecosystem
The general public's awareness/views of park purpose
Inappropriate/insufficient interpretation programs
General public's low awareness of national parks
Need to provide more environmental education programs
Lack of visitor management
Need to provide good quality of recreation experience
Need to guide visitors to non-disturbing behavior
Insufficient service/educational facilities for visitors
Lack of character distinction between parks
Lack of providing tourism opportunity (on-hand educational experiences in nature and culture)

# **User Satisfaction in Outdoor Recreation**

## A PRELIMINARY ANALYSIS OF FLORIDA STATE PARK SATISFACTION SURVEY DATA

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**Abstract:** This study is part of a five-year quality review process for Florida State Parks. It attempts to document the feelings visitors have about the parks they visit. The preliminary findings are very similar to results found in a similar study conducted in 1995 in which high levels of overall satisfaction were found. Despite high levels of overall satisfaction there were some significant differences found between some user groups.

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### Introduction

In 1994/95, the Florida Department of Environmental Protection, Division of Recreation and Parks undertook the first comprehensive study of visitors to Florida State Parks, State Recreation Areas and Special Feature Areas. The purpose of the project was to determine visitor satisfaction with Florida State Parks and evaluate the quality and effectiveness of the Florida State Park System. Research staff from the Leisure Services and Studies Program at Florida State University conducted the study.

In 2000, researchers from the University of Florida, Department of Recreation, Parks and Tourism, Center for Tourism Research and Development implemented a research project to continue the evaluation of visitor satisfaction at Florida State Park operations. This five-year review is part of an ongoing process to understand how users feel about the Florida State Parks. Modeled generally on the 1994/95 project, this study attempted to add a greater understanding of issues important to Florida State Park visitors and the Florida Park Service by adding questions to learn more about the visitation, dining and information gathering patterns of visitors to Florida State Parks. Questions were also asked to determine what roles visitors felt that parks should play as public resources.

In revisiting visitor satisfaction issues after five years, it is important to note a number of conditions that have changed:

1. The number of visitors and the number of facilities operated by the Division increased substantially.
2. Technology such as the World Wide Web emerged as a major method of communicating information.

3. The Division embarked on a major Eco-tourism initiative, as environmental tourism and heritage tourism became two of the fastest growing types of tourism worldwide.
4. The Division is developed new administrative rules to permit pets in some Florida State Park campgrounds.
5. Research models for visitor satisfaction are more sophisticated as issues of service quality, price/value and customer loyalty were further developed

### Purpose

This study, modeled generally on the 1995 study, attempts to add a greater understanding of issues important to Florida State Park visitors and the Florida Park Service. Of particular interest are comparisons between the 1995 and 2000 study and comparisons of satisfaction scores between different user groups visiting the parks.

### Methodology

In order to insure comparability with the previous study, the basic methods and survey instrument were the same. Twenty-five locations throughout the state were selected to take part in the study. A stratified random sample, stratified by type of operation (state park, state recreation area, and state special use area) and management regions was developed.

Selected parks were sampled 4 times during the year 2000 (January, April, July and October). The week prior to the beginning of each survey month, managers were shipped boxes containing 400 survey instruments (consisting of the questionnaire and a return envelope). Each park distributed a total of 1,600 questionnaires throughout the year with a total of 40,000 questionnaires distributed throughout the system during the yearlong period.

Park personnel were asked to distribute survey packets to visitors as they entered the park during each survey period. Staff members were asked to distribute a maximum of 40 studies per day from the initiation of the survey period until all survey forms were been distributed regardless of the number of days required.

### Questionnaire

Similar to the previous study, the questionnaire was completed by the respondent and returned to the researchers using postage paid return envelopes. The questionnaire was developed with input from the Division of Recreation and Parks and was comparable to the previous study. Questions were also developed to learn more about the visitation, dining and information gathering patterns of visitors to Florida State Parks.

The questionnaires were printed on a computer scan able form. Questions were generally forced choice questions with respondents indicating their answers by darkening in ovals next to selected items. There were no open-ended questions on the survey though respondents were encouraged to add any additional comments on separate paper.

## Results

Overall, 5,162 visitors to the Florida State Parks took time to return completed and usable surveys. This represents an estimated return rate of 12.9% if all questionnaires were actually disbursed. Under this methodology, no attempt was made to determine how many surveys each park actually passed out each quarter.

### Respondents

As seen in Table 1, about 65% of the respondents were Florida residents though the largest group was from outside the county of the park. The most common age group reported was 45- 64 years of age with about reporting incomes between \$30,000 and \$60,000. Visitors were primarily Caucasian with only 6.1% of the respondents being minorities.

### General Satisfaction Scores

Respondents were asked to rate their level of agreement with 12 general statements about their most recent visit to a Florida State Park. Response categories were: 1 = "Strongly Agree", 2 = "Agree", 3 = "Neutral", 4 = "Disagree", 5 = "Strongly Disagree". Thus, in this section, the lower the number, the more strongly respondents agree with the statement.

As seen in Table 2, the General satisfaction Scores indicate a high level of agreement with the statements made about the parks. In this table, responses have been sorted in ascending order so that the items most strongly supported are listed on the top of the table and the items least strongly supported are listed toward the bottom of the table. It should be noted that all items averaged 1.85 or less which indicates that, on average, all items were ranked between "Strongly Agree" and "Agree". When comparing the 1995 scores to the 2000 scores, slight improvements were noticed in all areas except one: "The park is adequately staffed." In this case, scores dropped from 1.67 to 1.85.

Respondents feel most strongly that the natural and cultural features of the park are worth protecting (1.15), and that they would like to visit the park again (1.40) and they are satisfied with their visit (1.43). They feel least strongly that "The park is adequately staffed" (1.85), "The cultural and historical features are managed appropriately" (1.76) and "Overall, the park fees are fair" (1.70).

**Table 1. Description of Respondents**

<u>Residence</u>	<u>Count</u>	<u>%</u>
Fl County w/ Park	1164	23.4
Fl County w/o Park	2089	42.0
Other US State	1497	30.1
Canada	115	2.3
<u>Intl Not Canada</u>	<u>108</u>	<u>2.2</u>
Total	4973	100.0

<u>Age</u>	<u>Count</u>	<u>%</u>
18 - 24	167	3.4
25 - 44	1595	32.2
45 - 64	2148	43.4
<u>65 Plus</u>	<u>1043</u>	<u>21.1</u>
Total	4953	100.0

<u>Ethnicity/Race</u>	<u>Count</u>	<u>%</u>
Caucasian	4306	93.9
Hispanic	106	2.3
African American	20	.4
Asian	27	.6
<u>Other</u>	<u>129</u>	<u>2.8</u>
Total	4588	100.0

<u>Income</u>	<u>Count</u>	<u>%</u>
Less than \$15,000	168	3.8
\$15,001 to \$30,000	664	15.1
\$30,001 to \$45,000	973	22.2
\$45,001 to \$60,000	996	22.7
\$60,001 to \$75,000	570	13.0
<u>More than \$75,000</u>	<u>1015</u>	<u>23.1</u>
Total	4386	100.0

**Table 2. General Satisfaction Scores**

<u>Comment</u>	<u>1995 Report</u>	<u>2000 Report</u>
Natural and cultural features of the park are worth protecting	1.16	1.15
I would like to visit this park again	1.45	1.40
Overall, I am satisfied with my visit	1.51	1.43
Staff was courteous & friendly	1.48	1.46
I feel safe in this park	1.67	1.49
Visit was well worth the money I spent	N/A	1.50
Staff members were prompt and helpful	1.55	1.51
Natural features of the park are appropriately managed	1.67	1.59
The weather was good during my visit	1.83	1.59
Overall, the park fees are fair	N/A	1.70
Cultural and historical features are managed appropriately	N/A	1.76
Park is adequately staffed	1.67	1.85

### Comparisons between Groups

When comparisons were made between different user groups, several interesting findings were discovered. When comparing residents and non-residents, there were significant differences between groups on every variable. In each case, residents were more satisfied than non-residents.

When comparisons were made between satisfaction scores by race/ethnicity several differences were found (Table 3). "African Americans" and "Others" were least likely to feel that the natural and cultural features of the park were worth protecting. "African Americans" and "Others" were least likely to feel that the natural features were being appropriately managed while Asians were least likely to feel that the cultural/historic features were being appropriately managed.

"African Americans" and "Others" were also least likely to feel that the park fees were fair, the park was adequately staffed, and the visitor was worth the money. African Americans and Hispanics were least likely to feel that the staff was courteous and friendly.

### **Discussion**

Overall, the General Satisfaction Scores for the Florida State Parks are very good. There were high levels of agreement with all the positive statements made about the parks. People felt most strongly that the natural and cultural

features of the parks were worth preserving and that they would like to visit the park again. When comparing the scores from this study to those from 1995, the general evaluation scores improved in every case except one.

The findings that respondents are less satisfied with staffing levels in 2000 is important to Florida State Park administrators. During the Summer of 1999, under the direction of Governor Jeb Bush, state administrators were requested to develop plans to reduce the size of all state agencies by 25% over a 5 year period. This plan is to include all state parks. Administrators are faced with a dilemma – on one hand, public satisfaction with staffing levels was already dropping before the mandate – on the other hand, there is strong pressure from the governor to make additional cuts.

Though state park visitors seemed quite pleased with the parks, there were some variations depending upon user group. This points out that the Florida State Parks are attractive to several constituencies and management plans should consider all groups. However, there are some potential challenges for park management in meeting the needs of minorities, particularly African Americans.

### **Reference**

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**Table 3. Differences in Satisfaction Scores by Race/Ethnicity**

<u>Comment</u>	<u>Caucasian</u>	<u>Hispanic</u>	<u>Afr. Amer</u>	<u>Asian</u>	<u>Other</u>
Natural and cultural features of the park are worth protecting	1.13	1.20	<b>1.35</b>	1.04	<b>1.37</b>
Natural features of the park are appropriately managed	1.58	1.48	<b>1.75</b>	1.37	<b>1.78</b>
Cultural/historical features are managed appropriately	1.75	1.80	1.75	<b>1.46</b>	2.07
Overall, the park fees are fair	1.69	1.65	<b>1.85</b>	1.26	<b>1.98</b>
The park is adequately staffed	1.84	1.87	<b>2.16</b>	1.62	<b>2.01</b>
Visit was well worth the money I spent	1.49	1.48	<b>1.80</b>	1.15	<b>1.67</b>
Staff was courteous & friendly	1.45	<b>1.56</b>	<b>1.75</b>	1.19	1.49

**Note: All variables mentioned are significant at the .05 level or greater**

# RECREATIONISTS IN THE COLUMBIA RIVER GORGE NATIONAL SCENIC AREA: A SURVEY OF USER CHARACTERISTICS, BEHAVIORS, AND ATTITUDES

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**Abstract:** The U.S. Forest Service has begun a comprehensive recreation research effort designed to understand visitor use patterns, satisfaction levels, and economic expenditures of forest recreationists. This study examines four categories of variables (socio-demographic, recreation experience, economic expenditure, and customer satisfaction) across a set of five independent variables (type of site, stratum, survey period, state, and season) for the Columbia River Gorge National Scenic Area. The greatest differences were noted for the socio-demographic variables, place attachment variables, and motivations for visiting. Fewer differences were noted across the satisfaction, management preference, and economic expenditure variables.

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## Introduction

In 1999 the USDA Forest Service (USFS) initiated a national research effort designed to understand recreation use patterns in every national forest across the United States. The National Visitor Use Monitoring (NVUM) study will evaluate one-quarter of the national forests each year. The primary purpose of this study is to provide managers with the number of visitors using USFS facilities and lands. Initial indications are that the USFS will continue to rotate each of the forests through the NVUM study every four years, thus providing a longitudinal study that will facilitate managers' decision making abilities when integrated with new and existing management plans. The Columbia River Gorge National Scenic Area (CRGNSA) was one of the initial National Forest units to undergo the NVUM process. On-site sampling was conducted in the CRGNSA to examine recreational use patterns, satisfaction levels, economic expenditures, and visitors' perceptions of place attachment, motivations to visit, and management preferences.

Market segmentation as a method of managing different recreation users has been recommended by many recreation researchers (Graefe, 1981; Andereck & Caldwell, 1994). For example, users' gender and age have been shown to be valid predictors of perceived park safety (Westover, 1984). Absher and Lee (1981) noted that visitor characteristics and prior experience had an effect on perceptions of crowding in a National Park. Absher, Howat, Crilley, and Milne (1996) measured visitor use characteristics at sporting events and

leisure centers in Australia and New Zealand, demonstrating that customer characteristics such as gender, age, and disability status impacted overall satisfaction levels of users. This study also revealed visit characteristics that showed specific market segments of visitors with significantly different levels of satisfaction.

## Description of Study Site

The Columbia River Gorge National Scenic Area is located along the Columbia River, straddling the borders of Oregon and Washington. The CRGNSA encompasses an 80-mile length of land and water along the Columbia River, running from Reed Island, just east of Troutdale, Oregon and Washougal, Washington to Miller Island, near The Dalles, Oregon. The CRGNSA is made up of the natural gorge of the Columbia River, and is one of the Pacific Northwest's most unique outdoor recreation areas, with a plethora of outdoor recreation activities offered in many different settings. The CRGNSA is the only sea level east-west break in the Cascade Mountain Range, providing very strong winds that facilitate superb sail boarding opportunities. The CRGNSA is host to over 120 scenic waterfalls and hiking trails, and includes one of the nation's first scenic highways.

## Survey and Analysis Methods

The survey instruments used in this study were designed by the USDA Forest Service's Southeast Research Station for nationwide application. Three different survey versions were used to query visitors about their visitor use patterns, demographics and trip characteristics, satisfaction levels, and economic expenditures. The three instruments included a *basic version* (visitor use patterns, demographics, and trip characteristics); *satisfaction version* (basic version plus importance/satisfaction and crowding indicators); and an *economic version* (basic version plus trip expenditure measures). A short on-site *experience addition* was added for the CRGNSA study. The experience version queried visitors about their sense of place, motivations for recreating in the CRGNSA, management preferences, and so forth.

Data collection followed the protocol for the national (NVUM) study. An onsite face-to-face interview was used to obtain feedback from a sample of recreationists in the CRGNSA. The onsite survey took approximately 5-10 minutes to complete, depending on the version of the instrument that was used in the interview. Approximately one-half of the visitors were interviewed with the basic version/experience addition, while one-quarter received the satisfaction version and one-quarter received the economic version. Sampling was conducted according to a random sampling plan developed by the NVUM national office, and included approximately 200 days of interviewing during the period January 1 to December 31, 2000. A total of 1282 onsite surveys were completed, resulting in a participation rate of 95.5%.

For the purposes of this paper, we compared socio-demographic information, satisfaction levels, economic

expenditures, and experience perceptions across several independent variables. These variables included the *type of survey site* (general forest area versus developed area), *use stratum* (high, medium, or low use as determined by area resource managers), *survey period* (morning or evening), *state* the respondent was interviewed in (Oregon or Washington), and *season* (data were broken down into the four established seasons).

### Visitor Demographics and Trip Characteristics Results and Discussion

The majority of visitors interviewed for this study (60.4%) were married, and almost two-thirds (62.9%) were males. The mean age of study respondents was 43 years old, and almost half (47.1%) reported an income of between \$40,000-70,000 for the 1999 tax year. This group of respondents was highly educated, with almost one-third (32.4%) reporting education beyond a bachelor's degree, and 35.5% reporting that they completed a bachelor's degree. Only 13.5% of the respondents indicated that they had a high school degree or less.

About half of the interviews (52.8%) took place during an 8:00 am--2:00 pm shift, with the remainder during the 2:00 pm--8:00 pm shift. Interestingly, the majority of the respondents reported that the Columbia River Gorge was their primary destination, and only 14.5% indicated that they were visiting the area for the first time. Columbia River Gorge National Scenic Area visitors were most likely to be interviewed in family groups (40.7%), in groups consisting of friends (25.8%), or family and friends (14.5%).

Numerous significant differences emerged when the socio-demographic and trip variables were compared across the five independent variables (Table 1). The season variable showed the greatest number of differences across the trip characteristics and socio-demographics, with seven of the 10 dependent variables showing significant differences.

Five of the variables differed by state, and four differed by type of site at which the respondent was surveyed. No variables showed significant differences across all five independent variables; several variables varied by two or three of the independent variables.

Visitors who were contacted during the fall season were more likely than those in other seasons to be male and employed outside of their home. Fall respondents were also less likely to agree to participate in the interview. Winter visitors tended to be in smaller groups. Summer visitors were more likely to have children under 16 in their group and more likely to have graduate degrees. Females and retired individuals were more common during winter and spring.

The state in which users were surveyed showed some notable differences as well, with Oregon users much more likely to be married and somewhat older than Washington users. Additionally, Oregon respondents tended to have more people in their cars than Washington users. Washington visitors were more likely than those in Oregon to be white, single, and to hold a graduate degree.

Type of survey site also accounted for some differences between visitors. People interviewed in developed areas were generally younger and more diverse ethnically than those sampled at general forest areas. The developed area users also showed a higher proportion of females and individuals in the middle income brackets.

Some slight differences were noted across the two survey periods (morning or afternoon), with afternoon users being older and more likely to be employed outside the home than morning respondents. Lastly, only two differences were noted across the use level strata. People interviewed at high use sites tended to be more diverse ethnically and in larger groups than those at either high or low use sites.

**Table 1. Summary of Significant Differences in Demographics and Trip Characteristics by Five Independent Variables (Chi square or F-values; non-significant values not shown)**

Demographics and Trip Characteristics	Survey Period	State	Stratum	Season	Site Type
Willing to participate				44.6	
Number in car		26.6	6.2	2.7	
Number under 16				6.2	
Gender				19.0	6.8
Ethnicity		7.5	7.4		8.6
Education		9.8		22.7	
Employment	9.9			42.4	
Marital status		4.9			
Age	15.5	14.9			13.3
Income				36.9	14.9

## Recreation Experience Version Results and Discussion

There were numerous significant differences across three categories of experiential variables (place attachment, motivations for recreating, and management preferences). The management preference items showed the fewest differences across the independent variables (Table 2). Of the nine motivation variables, use stratum accounted for the greatest number of differences (5 of 9 significant), while three of the nine motivations differed by state and season. The place attachment items showed the most significant differences when compared across states and use strata (Table 2).

A series of five statements queried visitors about their attachment to the place they were visiting. Differences were noted across three of the five independent variables, with survey period and user type showing no significant differences. Four of the five variables were significantly different across the state variable. Oregon visitors were much more likely to report that the main reason for their visit was "because it is the Columbia River Gorge," while Washington users were much more focused on the Gorge as a place to do their chosen activity. Those visitors

interviewed in Washington generally were more attached to the place they visited within the Columbia River Gorge.

The stratum category showed differences in the place attachment items as well. Users interviewed at the low use sites were more likely to agree with the site-specific place attachment indicators. Recreationists at high use sites felt that companionship was more important, and tended to agree more closely with the statement indicating that the Columbia River Gorge itself was their main reason for visiting. One of the five place attachment items differed significantly across the four seasons. Winter users were more likely to agree that "this place means a lot to me."

Nine statements examined visitors' motivations for recreating in the Columbia River Gorge. The stratum variable showed the most differences in the motivation scales, with five of the motivations differing across use level strata. Three of the nine variables showed significant differences for both the state and season categories. No differences were noted with regards to the survey period, and only one difference was noted for the type of site visited.

**Table 2. Summary of Significant Differences in Experience Variables by Five Independent Variables (F-values; non-significant values not shown)**

Experience Variables	Survey Period	State	Stratum	Season	Site Type
<b>Place attachment</b>					
Most important reason for visiting (because it is the Gorge, activity, place, companions)		12.8	10.9		
This place means a lot to me				3.1	
I enjoy recreating at this place more than any other place		6.4	3.6		
I am very attached to this place		5.6	4.7		
I get more satisfaction out of visiting this place than from visiting any other place		6.9	4.9		
<b>Motivations to visit</b>					
To be outdoors			5.0		
For relaxation			3.5		3.3
To get away from the regular routine					
For the challenge or sport		5.2	6.9	3.0	
For family recreation		9.7		3.3	
For physical exercise		4.7	6.5		
To be with my friends				2.9	
To experience natural surroundings					
To develop my skills			8.6		
<b>Management preferences</b>					
More wildlife viewing areas or opportunities				4.9	
More picnic areas					
More parking spaces					
Better signs directing me to recreation areas				5.3	
More interpretive rangers at recreation areas	5.1	7.2		4.2	

With regards to use stratum, visitors interviewed at medium use sites generally attached more importance to the motivation items. Visitors at the medium use sites especially emphasized challenge and physical effort. Visitors at the high use sites showed the lowest level of importance associated with physical exercise and developing their skills.

Washington visitors attached more importance to challenge and physical exercise, while visitors sampled at Oregon sites gave higher scores for the importance of family recreation. The seasonality variable also accounted for three significant differences among the nine motivation variables. Winter users attached the most importance to being with friends, while spring visitors rated family recreation as more important. Spring visitors attached less importance to challenge than visitors during the other three seasons.

Three of the five management preference items showed significant differences across the four seasons, while few differences were noted for the other independent variables. Better signs directing visitors to recreation areas and additional rangers were generally supported across all seasons, but were most important for winter visitors. Additional parking was a less popular management option, with the exception of respondents interviewed during the winter. Winter visitors also showed more support for additional interpretive rangers at recreation areas compared to visitors during the other three seasons. Interest in more interpretive rangers also varied by state and survey period. Visitors interviewed at Oregon sites and during the morning survey period expressed stronger support for more interpretive rangers at recreation areas.

### Customer Satisfaction Version Results and Discussion

Regarding customer satisfaction, fourteen specific satisfaction attributes were examined through the use of a five-point Likert scale (Table 3). Performance and importance were measured for each of the items. A 10-point overall satisfaction scale was used to measure the respondents' overall trip quality. In addition, visitors were asked to report the degree of crowding that they perceived at the recreation site on a 10-point scale.

Significant differences were noted across four of the five independent variables. The season variable showed the greatest differences, with 11 of the 16 satisfaction indicators differing significantly across seasons. There was a large drop-off of significant differences in the other independent variables. Differences were noted across four satisfaction indicators for the state variable, three for the stratum variable, and only one significant difference was noted for the type of survey variable. No significant differences were noted for the survey period. Interestingly, few patterns could be identified across the independent or dependent variables. With the exception of the crowding indicator, which showed significant differences across three of the independent variables (stratum, state, and season), no more than two differences were noted across the independent variables.

Considering differences between the two states, visitors in Oregon gave higher satisfaction scores than Washington visitors for three specific attributes (scenery, signage, attractiveness of forest landscape). However, there was no difference between Oregon and Washington visitors in overall satisfaction, and Oregon visitors rated the sites as more crowded than their counterparts in Washington.

**Table 3. Summary of Significant Differences in Satisfaction Variables by Five Independent Variables (F-values; non-significant values not shown)**

Satisfaction Attributes	Survey Period	State	Stratum	Season	Site Type
Scenery		5.0			
Parking availability				6.0	
Parking lot condition				6.8	
Restroom cleanliness				7.1	8.8
Condition of natural environment			11.6	8.9	
Condition of developed facilities			7.1	10.8	
Condition of forest roads					
Condition of forest trails					
Availability of recreation information				6.2	
Feeling of safety				2.6	
Adequacy of signage		4.8			
Employee helpfulness				3.9	
Attractiveness of forest landscape		13.5		4.8	
Value for fee paid					
Overall satisfaction				6.8	
Crowding		17.6	12.8	2.7	

Visitors sampled at low use sites rated the condition of both the natural environment and developed facilities lower than those interviewed at medium and high use sites. Not surprisingly, perceived crowding was higher at high use sites than at medium or low use sites.

A closer examination of the season variable showed no clear pattern of satisfaction scores across seasons. Recreationists interviewed during the winter season reported especially low levels of satisfaction for parking availability, parking lot condition, restroom cleanliness and availability of information. They also showed the lowest levels of overall satisfaction. Fall interviewees showed the highest satisfaction scores for availability of parking, availability of information, and feeling of safety. The fall group, however, showed the lowest satisfaction scores for condition of the natural environment, condition of developed facilities, and staff helpfulness. Summer users reported the highest satisfaction scores for parking lot condition, restroom cleanliness, and overall satisfaction. Spring users showed the highest satisfaction scores for condition of the environment and the forest landscape, but showed the lowest ratings for feelings about safety and crowding.

#### Economic Expenditure Version Results and Discussion

A series of questions focused on how much money respondents spent on recreation-related items and services. Very few differences were noted across the five independent variables for the economic expenditure variables (Table 4). Of particular note is the lack of differences between the two states and the four seasons, while these two variables accounted for many of the differences within the satisfaction and experience variables.

The type of site at which the respondent was interviewed showed significant differences for purchases of fuel and other transportation costs. Visitors interviewed at general forest areas spent significantly more money on gasoline and oil, while those interviewed at developed use sites spent more money on other types of transportation. Both of these findings were expected, since dispersed users may drive

further or may have been driving larger, less fuel-efficient vehicles. Developed site users may have been part of a bus tour, or even on a day trip away from a cruise ship on the Columbia River. The only other significant differences associated with recreation economic expenditures were noted for season. Respondents who were interviewed during spring or summer spent significantly less money on private lodging, while fall visitors were most likely to have spent money for other transportation costs.

#### Conclusions and Implications

The preceding results show numerous differences across the independent variables examined. The socio-demographic and trip characteristics show us that these users are indeed different people when examined by other than ethnic make-up. Significant differences were noted in respondents' ages and party size for three of the five independent variables. Most differences, however, were noted across the four seasons during which this survey was conducted in 2000.

Few differences were noted across the economic expenditure variables, and no distinct patterns were noted for these variables. Perhaps this is attributable to the relatively close distances between the sites (most sites are located within minutes of a highway) and the relatively small size of the CRGNSA in comparison to most other National Forests. It was interesting to note that no expenditure differences were noted across the two states of Oregon and Washington, given the differences found between these two states in other areas.

The satisfaction indicators showed great differences across the four seasons. Although no distinct patterns emerged, it was clear that those visitors interviewed during the summer season were most satisfied, followed by spring users. Winter respondents were least satisfied, followed closely by those respondents who were contacted during the fall season. Statewide comparisons showed that satisfaction ratings were always higher for the Oregon side of the Columbia River. This coincides with more high-use areas, which in turn may receive more attention from maintenance

**Table 4. Summary of Significant Differences in Economic Variables by Five Independent Variables (F-values; non-significant values not shown)**

Economic Version	Survey Period	State	Stratum	Season	Site Type
Government lodging					
Private lodging				3.1	
Restaurants/bars					
Other food/drinks					
Fuel/oil, etc.					3.2
Other transportation costs				5.5	3.0
Recreation activities					
Entry/parking fees					
Souvenirs					
Other expenses					
Total spent annually					

personnel. It was interesting to note that Oregon users rated crowding as worse than Washington respondents. This may be a function of the type of activities that are offered in each state. Oregon offers more social-oriented opportunities (a scenic highway, waterfalls near the roadway, developed picnic areas, etc.), while Washington users tend to participate in activities that involve a degree of solitude, such as hiking, biking, flower viewing, etc.

The category that showed the most significant differences was the visitor experience variables. Oregon and Washington visitors are clearly different in their feelings of place attachment toward the CRGNSA. Washington respondents, while attached to the place where they do their outdoor recreation activity, are more focused on the activity itself. Conversely, Oregon respondents seem more likely to feel that the special designation of the Columbia River Gorge as a National Scenic Area is important to them. It is clear that the different strata attract people for different reasons. Visitors to the high use areas do tend to care that it is "the Gorge," and not just another place to participate in their chosen outdoor recreation activity. Respondents who were interviewed in the winter season placed the most agreement on one place attachment item, indicating that the place they visited means a lot to them.

Motivations to visit the recreation areas varied greatly across the stratum variable, once again demonstrating the different types of recreationists who visit the vast array of outdoor recreation sites that the CRGNSA has to offer. The recreation sites within the medium use category showed considerably higher degrees of importance for most of the motivation variables. An interesting finding is that few differences were noted across the types of survey sites (general forest versus developed sites). Seasonal differences were noted for motivations to visit as well, with winter respondents placing the highest levels of importance on being with friends. Spring users expressed the lowest importance for challenge and the highest importance for family recreation. A similar trend was noted across the two states, with Oregon visitors placing greater importance on social reasons, and Washington respondents more oriented toward physical activities.

Few differences were noted across the management preferences outlined in the instrument, and most of those

were noted across the four seasons. Respondents who were interviewed in the winter season showed greater support for additional rangers at the recreation sites and for additional parking areas. Winter respondents also indicated no opposition to adding more directional signs to the recreation sites, while recreationists surveyed during the other seasons showed some opposition to additional signs.

This paper demonstrates the need to understand visitors' motivations, needs, satisfaction levels, and use patterns across several variables. The socio-demographic make-up of CRG visitors is diverse in many ways; however these variables accounted for relatively few differences among the satisfaction and economic expenditure variables. The differences observed were particularly strong for variables related to the experience of the recreationists. Recreation managers may wish to focus on the experience variables outlined in this paper in order to better meet visitors' needs in an increasingly diverse outdoor recreation setting. Future analysis of these data will focus specifically on the influence of the recreation site and the activity pursued on satisfaction, economic expenditures and the recreation experience.

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## VISITOR SATISFACTIONS: BACKCOUNTRY AND WILDERNESS USERS IN THE WHITE MOUNTAIN NATIONAL FOREST

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**Abstract:** The opportunities and conditions sought by visitors in national forest backcountry and wilderness areas can affect the satisfaction they have with the experience. This study measured the recreation satisfaction ratings of hikers and backpackers during their trips to backcountry and wilderness areas in the White Mountain National Forest. Field interviews were conducted with 385 visitors to seven backcountry and wilderness areas during July 1, through September 4, 2000. An importance/satisfaction analysis compared satisfaction ratings with the important opportunities and conditions that were sought by visitors. Information about recreation resource management problems encountered by visitors was analyzed to provide comparisons with visitor satisfaction ratings. The study results indicate that: (1) hikers and backpackers rate similar opportunities and conditions as important across primitive and semi-primitive non-motorized Recreation Opportunity Spectrum areas; (2) hikers and backpackers achieve similar types and amounts of satisfaction across primitive and semi-primitive non-motorized Recreation Opportunity Spectrum areas; and (3) some differences in hiker and backpacker ratings of importance and satisfaction, plus problems perceived by users suggest the need for some additional indirect visitor management (e.g., information for visitors).

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### Introduction

Increasing recreational use in some backcountry and wilderness areas are a concern for managers, since crowding and more user-user encounters can negatively influence recreation visitor experiences and satisfactions. Furthermore, as a result of increased visitor use, some environmental and social conditions in backcountry and wilderness areas may be below the standards necessary to maintain Recreation Opportunity Spectrum (ROS) criteria

for primitive and semi-primitive non-motorized classification.

The ROS was designed as a regional, recreation planning tool to help planners and managers to conduct inventories, design target management standards, decide among alternative management actions, and provide a larger framework and context for multiple use recreation resource planning (Brown et al., 1978; Driver & Brown, 1978; Clark & Stankey, 1979a; Driver et al., 1987). These developments in the ROS concept lead to the adoption of the ROS by the USFS and subsequent publication of the planning concept in U.S. Forest Service planning and management documents, such as the "ROS Users Guide." The use of the ROS planning approach can help planners and managers to design management standards, decide among alternative management actions, and provide a larger planning framework and context for developing a continuum of backcountry and wilderness-related outdoor recreation opportunities. However, some would argue that use of the ROS has been superficial due to lack of understanding about its interaction with management actions and visitor experiences.

While the ROS has gained some use as a recreation planning and management tool among federal land managing agencies, visitor information related to ROS classifications is very limited. For example, the impacts of recreation activities and the acceptability of those impacts within the ROS classified areas have been studied (Clark & Stankey, 1979b) as well as the interactions of the ROS setting attributes and recreational activities in relation to user experiences (Virden & Knopf, 1989). A few other studies have investigated how campers' experiences affected their preferences for different ROS classes (Yuan & McEwen, 1989) and visitor preferences for ROS setting components (Heywood, 1991). Wallace and Smith (1997) conducted a study that measured the motivations, setting preferences, and preferred management actions of visitors to protected areas in Costa Rica; the study included "primitive", "semi-primitive motorized", and "roaded natural" areas and offers some insight into measuring related to the present study.

The objectives of this study are to measure: (1) the opportunities and conditions sought by hikers and backpackers in national forest backcountry and wilderness areas; (2) the satisfaction ratings of hikers and backpackers during their trips to backcountry and wilderness areas; and (3) the recreation resource management problems as perceived by hikers and backpackers during their trips to backcountry and wilderness areas.

### Research Methods

The study design relied upon brief, on-site interviews of hikers and backpackers during their trips in seven wilderness and non-motorized, backcountry areas of the White Mountain National Forest (WMNF) in New Hampshire and Maine. This data collection technique ensured that visitor responses to survey questions reflected their actual on-site recreation experience. A survey

instrument was designed to gather most of the data in this study during a 15-minute interview in the field by a trained interviewer.

The interview sites and sampling schedule for the summer months were stratified based on the level of recreational use within each of the seven backcountry and wilderness areas of the WMNF. Some of the most important criteria used in selecting the study areas were: (1) estimated summer recreation use levels; (2) location of hiking trails and trailheads for day use or overnight use; (3) existing ROS classes and WMNF management units; and (4) whether recreation conflicts or overuse were reported and where management actions may be most needed to mitigate or prevent such problems. Seven study areas were selected (see figure 1) and categorized based on ROS classifications for the area: (1) *Primitive* areas included the Pemigewasset Wilderness and Wild River Backcountry; (2) the mixed *Primitive* and *Semi-primitive non-motorized* areas included the Presidential Range-Dry River Wilderness, Kilkenny Backcountry, and Sandwich Range Wilderness; and (3) *Semi-primitive non-motorized* areas included the Great Gulf Wilderness and Caribou Speckled Mountain Wilderness.

A total of 51 interview sites was selected in the seven areas (see Figure 1) with the number in each area ranging from six to 12 depending on the size of the area, number of public access points, and estimated visitor use. Each site was visited systematically three times during the 10-week sampling time from July 1 to September 4, 2000. However, some interview sites were dropped from the study after the first sampling session because a variety of factors that seriously limited the amount of use at that site (e.g., road access or parking lot limitations) during those weeks of sampling. Subsequently the remaining sites were sampled up to four times each.

Each day interview sessions were held for three hours at three different sampling locations: (1) a morning session starting at about 9 a.m. and ending about 12 noon, (2) an afternoon session starting about 1-2 p.m. and ending about 4-5 p.m., and (3) an evening session starting about 5-6 p.m. and ending about 8-9 p.m. The variability in starting and ending times related directly to the driving time necessary to move from one sampling location to the next between the three-hour interview blocks of time. Complete records were kept on the three-hour interview process to know the location, date, number of interviews, refusals to cooperate in the study, the number of visitors seen, and other factors during the three-hour period.

The on-site interview survey determined: (1) size and type of visitor group; (2) day or overnight type user; (3) recreation activities participated in by visitors while in that area during that trip; (4) visitor's perception of the importance of and satisfaction with 12 wilderness and back country recreation experience and setting attributes; (5) visitor preferences for 16 potential management actions that could be used in the WMNF to reduce recreation user impacts and/or conflicts; and (6) previous recreation experience in the WMNF by the visitor.

The survey instrument was based on previous research on the satisfactions of wilderness visitors (Dawson et al., 1998; Newman & Dawson, 1999; Dawson & Watson, 2001). The visitor's perception of the importance of and satisfaction with wilderness and back country recreation *opportunities* were measured with eight items:

1. Natural Environment -- enjoy the view from a mountain top; experience the scenic quality of nature; observe and hear wildlife; the tranquility & peacefulness of a remote area.
2. Physical Activity -- physical exercise and health; physical challenge.
3. Personal and Social Experiences -- get away from daily routines; develop a sense of self confidence; chance to think and solve problems; simplify daily needs.
4. Exploration and Remoteness -- an area free of man-made noises; remoteness from cities & people; an adventure & sense of discovery; feel like I was one of the first to experience this area.
5. Solitude -- a small, intimate group experience; isolated from other groups; privacy.
6. Connections with Nature -- get in touch with my true self; opportunity for self-discovery; develop a sense of oneness with nature.
7. Connection with Other Wilderness Users and Inspiration -- feel connected to a natural place that is important to me; celebrate wilderness as a symbol of naturalness; feel a sense of an earlier and rugged time in history.
8. Wilderness Skills -- improve wilderness travel skills; learn to travel to a remote destination and return successfully; a sense of self-sufficiency; recreation in a primitive environment.

The visitor's perception of the importance of and satisfaction with wilderness and back country recreation *conditions* were measured with four items:

1. No Litter and Waste -- amount of litter along the trails and at campsites; campfire rings.
2. Management Conditions -- condition of the trail system; publicized rules and regulations; the number of visible places where others have hiked and camped.
3. Information on Backcountry and Wilderness Area -- finding safe drinking water; information on where other users are likely to be; find an unoccupied campsite.
4. Numbers of users -- number of hikers you saw on trails; number of large groups you saw on trails; number of groups that camped near you.

## Results

The 335 hours of interviewing resulted in 385 completed interviews (Table 1) with hikers and backpackers, and only 18 visitors refused to participate for a variety of reasons (e.g., too tired, rainy weather). Of the total, 228 interviews (59%) were held in the Primitive areas, 95 interviews (25%) were held in the mixed Primitive and Semi-primitive non-motorized areas, and 62 interviews (16%) were held in the Semi-primitive non-motorized areas (Table 1).

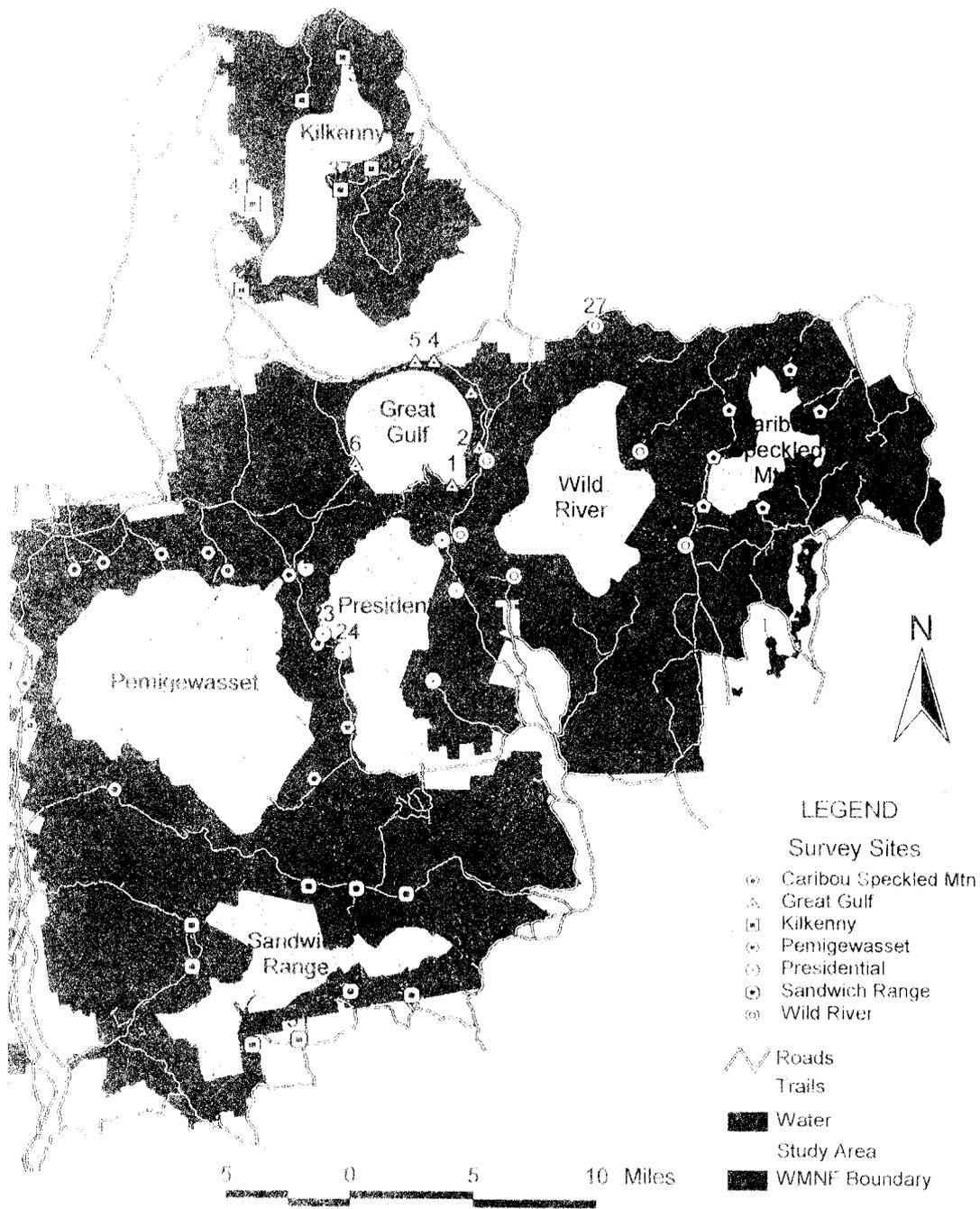


Figure 1. Location of Study Areas and Interview Sites in the White Mountain National Forest in the Summer of 2000

**Table 1. White Mountain National Forest Backcountry and Wilderness Recreation Study Areas and Interviews in the Summer of 2000**

ROS Category for Backcountry and Wilderness Areas	Number of Sampling Sites	Interview Hours	Number of Interviews	Number of Interview Refusals
<b>Primitive areas</b>				
Pemigewasset Wilderness	12	90	171	6
Wild River Backcountry	6	51.3	57	2
subtotal	18	141.3	228	8
<b>Primitive and Semi-Primitive non-motorized areas</b>				
Presidential Range-Dry River Wilderness	6	45.1	60	0
Kilkenny Backcountry	6	19.6	3	0
Sandwich Range Wilderness	9	49.3	32	3
subtotal	15	112	95	3
<b>Semi-Primitive non-motorized areas</b>				
Great Gulf Wilderness	6	46.7	42	7
Caribou Speckled Mt. Wilderness	6	33.6	20	0
subtotal	12	80.3	62	7
<b>TOTAL</b>	51	335.6	385	18

The backcountry and wilderness visitors were day hikers in 62% of the cases and overnight backpackers in 38% of the cases (Table 2); somewhat greater percent were day hikers in the semi-primitive non-motorized areas and overnight backpackers in the primitive areas. The average overnight stay was 2.1 nights for those who stayed out on a backpack trip. Groups were most often made up of friends (41%) and family (43%) and averaged 3.2 adults and 0.7 children per group (table 2). Only 14% of those interviewed were on their first trip to the WMNF; one-third had made 1-5 previous trips and 23% had made 21 or more trips to the WMNF (table 2). Day hikers were more somewhat

experienced on average than backpackers (Chi-square=22.8, 4 df, p=0.001) with 56% of day hikers taking 6 or more previous trips compared to 41% of backpackers.

Backcountry and wilderness hikers and backpackers reported engaging in many other recreational activities while on their trip to the WMNF (Table 3). The top recreational activity was viewing scenery, an activity reported by 78% of those interviewed. Other common activities in the WMNF were: photography, backpack camping, Appalachian Trail hiking, and picnicking.

**Table 2. Characteristics of Backcountry and Wilderness Recreation Users Interviewed in the Summer of 2000 on the White Mountain National Forest**

	ROS Categories			
	Primitive	Primitive and Semi-primitive	Semi-primitive non-motorized	Total
<b>Type of User</b>	<b>Percent</b>			
Day user	55	68	76	62
Overnight user	45	32	24	38
<b>Overnight length of stay</b>	<b>Average Nights</b>			
	2.1	2.0	2.1	2.1
<b>Group Type</b>	<b>Percent</b>			
Friends	44	31	42	41
Family	41	51	39	43
Organization	13	11	10	12
<b>Group Size</b>	<b>Average Number</b>			
Adults	3.2	3.4	2.7	3.2
Children	0.9	0.3	0.5	0.7
<b>Previous Experience in WMNF</b>	<b>Percent</b>			
None	16	12	13	14
1-5 trips	33	42	32	35
6-10 trips	17	14	8	15
11-20 trips	12	10	15	12
21 or more trips	22	23	32	23

**Table 3. Percent of Backcountry and Wilderness Users Interviewed by Reported Recreation Activity in the Summer of 2000 on the WMNF**

Typical Recreation Activities	ROS Categories			
	Primitive	Primitive and Semi-primitive	Semi-primitive non-motorized	Total
Viewing scenery	80	79	66	78
Photography	50	41	31	45
Backpack camping	32	33	32	32
Appalachian Trail hiking	30	20	13	25
Picnicking	22	24	15	21
Swimming	17	21	23	19
Camping in a campground	18	19	11	17
Nature study	13	6	13	11
Fishing	1	4	2	2
Boating/canoeing	0	4	5	2
Other activity	7	8	8	8

The hikers and backpackers interviewed rated the eight wilderness and backcountry opportunities and four conditions according to how *important* an influence they were on the quality of their trip. The response categories for trip importance were: 0 = not important, 1 = slightly, 2 = somewhat, 3 = moderately, 4 = very, and 5 = extremely important. Three opportunities were highly important on trips: natural environment, physical activity, and personal and social experiences (Table 4). One condition was highly rated: lack of litter and waste. Overall, the average ratings for all 12 opportunities and conditions were above the moderate importance category. While five of the 12 opportunities and conditions ratings for importance had a statistically significant difference (ANOVA statistical test with  $p=0.05$ ) between the three ROS categories, the actual

difference between means was too small (e.g., 0.3) as to lack significance for differentiating management by the three ROS categories (i.e., these differences in mean scores do not necessarily warrant differences in management approaches).

When considered separately, overnight backpackers were statistically more likely than day hikers to report somewhat higher importance for exploration and remoteness, wilderness skills, natural environment, and information on the wilderness area (T-test statistic,  $p<0.05$ ). The only significant difference in importance between visitors with higher levels of experience (more than 6 previous trips) and less experience was those with more experience more often reported that physical activity was important.

**Table 4. The Importance Ratings of Backcountry and Wilderness Recreation Users Interviewed in the Summer of 2000 on the WMNF**

Wilderness and backcountry opportunities and conditions	Importance Ratings <sup>b</sup> by ROS Categories			
	Primitive	Primitive and Semi-primitive	Semi-primitive non-motorized	Total
Opportunities				
Natural environment	4.6	4.3	4.5	4.5 <sup>a</sup>
Physical activity	4.2	4.1	4.5	4.2 <sup>a</sup>
Personal and social experiences	4.1	4.0	4.2	4.1
Exploration and remoteness	4.0	3.7	3.9	3.9
Solitude	3.7	3.4	4.0	3.7 <sup>a</sup>
Connections with nature	3.7	3.7	3.7	3.7
Connection with other wilderness users & inspiration	3.3	3.2	3.3	3.3
Wilderness skills	3.3	3.2	3.5	3.3
Conditions				
No litter and waste	4.3	4.5	4.6	4.4 <sup>a</sup>
Management conditions	3.6	3.5	3.7	3.6
Information on backcountry & wilderness areas	3.2	3.2	3.1	3.2
Numbers of users	3.3	2.9	3.2	3.2 <sup>a</sup>

<sup>a</sup> Statistically significant difference between ROS categories using ANOVA test with  $p<0.05$ .

<sup>b</sup> Importance rating: 0 = not important, 1 = slightly, 2 = somewhat, 3 = moderately, 4 = very 5 = extremely important.

The hikers and backpackers interviewed rated the eight wilderness and backcountry opportunities and four conditions according to how *dissatisfied or satisfied* they were with these on their trip. The response categories for trip dissatisfaction or satisfaction were: -2 = very dissatisfied, -1 = dissatisfied, 0 = neutral, 1 = satisfied, and 2 = very satisfied. Respondents indicated that they were very satisfied with three opportunities: physical activity, natural environment, and personal and social experiences (Table 5). One condition was rated as very satisfying: lack of litter and waste. Overall, the average ratings for 10 opportunities and conditions were above the satisfied category, only information on the wilderness and backcountry areas was rated less than an average score of satisfied (1.0). Only three items had 5% or more of those interviewed reporting either being dissatisfied or very dissatisfied: solitude (5%), exploration and remoteness (6%), and number of other users (7%). While five of the 12 opportunities and conditions ratings for satisfaction had a statistically significant difference (ANOVA statistical test with  $p < 0.05$ ) between the three ROS categories, the actual difference between means was so small (e.g., 0.2) as to lack significance for differentiating management by the three ROS categories (i.e., these differences in mean scores do not necessarily warrant differences in management approaches).

Comparisons of respondent satisfaction ratings by whether they were interviewed at a high, moderate, or low use trailhead (level of use estimated by WMNF staff) revealed only a few statistically significant differences (ANOVA

statistical test with  $p < 0.05$ ). Respondents at low use trailheads more highly rated their satisfaction with solitude, available trail information, and opportunities to use wilderness skills than did those at moderate or high use trails. Respondents at low and moderate use trailheads more highly rated their satisfaction with number of other users than did those at high use trails.

When considered separately, overnight backpackers were statistically more likely than day hikers to report somewhat higher satisfaction with information on the wilderness area (T-test statistic,  $p < 0.05$ ). No significant differences in satisfaction were found between visitors with higher levels of experience (more than 6 previous trips) than those with less experience.

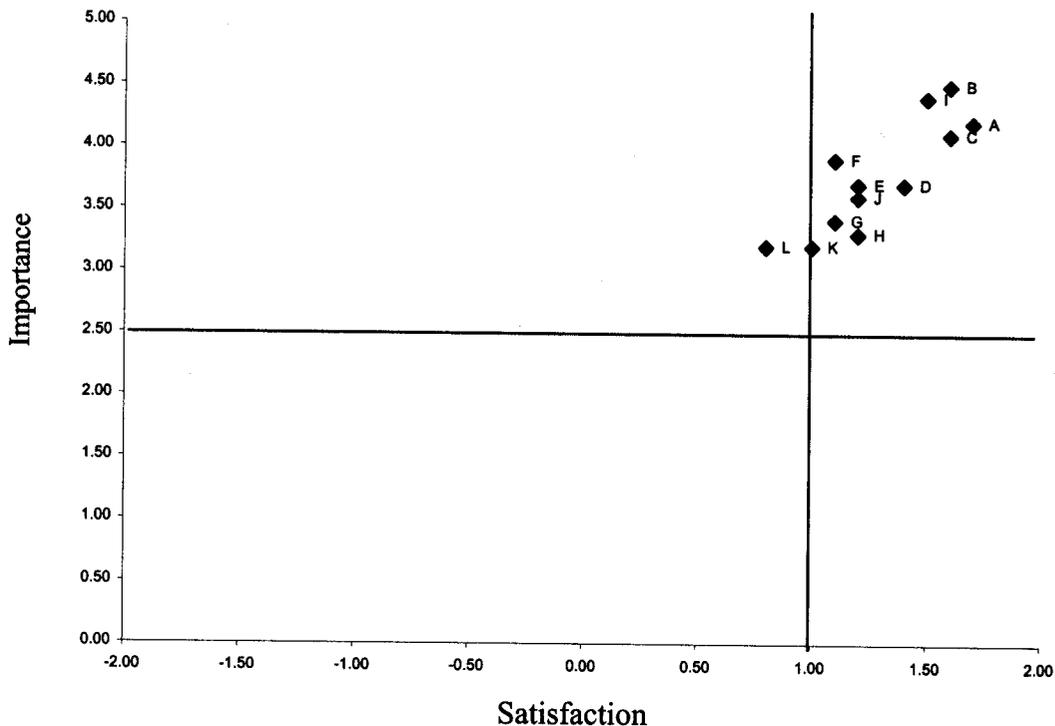
The average importance and satisfaction scores were graphically displayed (Figure 2) to summarize the overall respondent differences and suggest the items that need management attention (these plots are similar to the importance-performance plots used in management evaluations). All 12 items were labeled as well above moderate importance and only two items were at or below the 1.0 average satisfaction level: number of users and information on wilderness and backcountry areas. Therefore, the ratings on the other ten items suggest that management is *generally* doing well from the perspective of the hikers and backpackers. However, some trailheads had lower satisfaction ratings, suggesting issues like crowding and litter needed management attention.

**Table 5. The Satisfaction Ratings of Backcountry and Wilderness Recreation Users Interviewed in the Summer of 2000 on the WMNF**

Wilderness and backcountry opportunities and conditions	Satisfaction Ratings <sup>b</sup> by ROS Categories			
	Primitive	Primitive and Semi-primitive	Semi-primitive non-motorized	Total
<b>Opportunities</b>				
Physical activity	1.6	1.7	1.9	1.7 <sup>a</sup>
Natural environment	1.6	1.6	1.7	1.6
Personal and social experiences	1.5	1.7	1.7	1.6 <sup>a</sup>
Connections with nature	1.4	1.4	1.4	1.4
Solitude	1.1	1.3	1.6	1.2 <sup>a</sup>
Exploration and remoteness	1.1	1.0	1.4	1.1 <sup>a</sup>
Connection with other wilderness users & inspiration	1.1	1.2	1.2	1.1
Wilderness skills	1.2	1.2	1.4	1.2
<b>Conditions</b>				
No litter and waste	1.5	1.5	1.6	1.5
Management conditions	1.2	1.2	1.2	1.2
Numbers of users	0.9	1.0	1.2	1.0 <sup>a</sup>
Information on backcountry & wilderness area	0.9	0.9	0.7	0.8

<sup>a</sup> Statistically significant difference between ROS categories using ANOVA test with  $p < 0.05$ .

<sup>b</sup> Satisfaction rating: -2 = very dissatisfied, -1 = dissatisfied, 0 = neutral, 1 = satisfied, 2 = very satisfied.



Opportunities	Conditions
A. Physical activity	I. No litter and waste
B. Natural environment	J. Management conditions
C. Personal and social experiences	K. Information
D. Connections with nature	L. Numbers of users
E. Solitude	
F. Exploration and remoteness	
G. Connection/inspiration	
H. Wilderness skills	

**Figure 2. Importance-Satisfaction Analysis for the White Mountain National Forest Survey of Backcountry and Wilderness Recreation Users in 2000**

The hikers and backpackers interviewed were asked to indicate how much they perceived 16 conditions were problems for them during their wilderness or backcountry trip in the WMNF. The response categories for perceived problems were: 0 = not a problem, 1 = slight problem, 2 = somewhat of a problem, 3 = moderate problem, 4 = very much a problem, and 5 = extreme problem. All 16 items averaged less than the 1.0 slight problem category (Table 6). The top four listed problem items by those interviewed were related to the two lowest rated satisfaction items: number of users and information on wilderness and backcountry areas. While six of the 16 perceived problem ratings had a statistically significant difference (ANOVA statistical test with  $p < 0.05$ ) between the three ROS categories, the actual difference between means was so small (e.g., 0.2) as to lack significance for differentiating

management by the three ROS categories (i.e., these differences in mean scores do not necessarily warrant differences in management approaches). The perceived problem items did not appear to be important; they were rated either “very much a problem” or an “extreme problem” by less than 5% of the respondents. The highest percentage in these two combined response categories were: too many people on the trails (4%), too many people at campsites and shelters (4%), and too many large groups of users (3%). Overall, the low problem ratings indicate support for the relatively high satisfaction ratings reported by those interviewed. While these low problem scores suggest that overall users perceive problems as slight, there are some trailheads where higher levels of concern were indicated for some problems (e.g., too many people on trails, too many large groups).

**Table 6. The Perceived Problem Ratings of Wilderness and Backcountry Opportunities and Conditions by Backcountry and Wilderness Recreation Users Interviewed in the Summer of 2000 on the White Mountain National Forest**

Possible problems.	Problem Ratings <sup>b</sup> by ROS Categories			
	Primitive	Primitive and Semi-primitive	Semi-primitive non-motorized	Total
Too many people on the trails	0.9	0.4	0.4	0.7 <sup>a</sup>
Trails poorly marked	0.5	0.6	0.5	0.5
Too many people at campsites and shelters	0.6	0.4	0.3	0.5
Too many large groups of users	0.6	0.2	0.3	0.5 <sup>a</sup>
Litter along trails or at campsites	0.3	0.5	0.2	0.4 <sup>a</sup>
Not enough information on amount of use	0.3	0.3	0.2	0.3
Not enough information on campsites	0.2	0.6	0.4	0.3 <sup>a</sup>
Too many heavily impacted campsites	0.4	0.3	0.2	0.3
Rowdy or loud people	0.5	0.2	>0.1	0.3 <sup>a</sup>
Too much evidence of human waste	0.3	0.2	0.1	0.3
Dogs not under control or on a leash	0.4	0.1	>0.1	0.3 <sup>a</sup>
Too many restrictions and regulations	0.3	0.4	0.2	0.3
Not enough information to plan a trip	0.2	0.2	0.1	0.2
Too many fire rings from campfires	0.2	0.3	0.2	0.2
Too many cell phones and other electronic equipment used by other visitors	0.3	0.3	0.1	0.2
Too much Forest Service presence	>0.1	>0.1	0.0	>0.1

<sup>a</sup> Statistically significant difference between ROS categories using ANOVA test with  $p=0.05$ .

<sup>b</sup> Problem rating: 0 = not a problem, 1 = slight problem, 2 = somewhat of a problem, 3 = moderate problem, 4 = very much a problem, 5 = extreme problem.

Comparisons of respondent problem ratings by whether they were interviewed at a high, moderate, or low use trailhead (level of use estimated by WMNF staff) revealed only two statistically significant differences (ANOVA statistical test with  $p<0.05$ ). Respondents at high use trailheads more highly rated too many people on trails as a problem than did those at moderate or low use trails. Respondents at low use trailheads more highly rated dogs not on a leash as a problem than did those at moderate and high use trails.

When considered separately, overnight backpackers were statistically more likely than day hikers to report somewhat higher ratings of problems with not enough information on campsites, trails poorly marked, too many firings from campfires, too many people at campsites and shelters, and too many restrictions and regulations (T-test statistic,  $p<0.05$ ). No significant differences in reported problems were found between visitors with higher levels of experience (more than 6 previous trips) and those with less experience.

### Implications and Discussion

The study results indicate that hikers and backpackers rate similar opportunities and conditions as relatively highly important across primitive and semi-primitive non-motorized Recreation Opportunity Spectrum areas of the WMNF. The relatively homogeneous importance ratings across these ROS areas, suggest that the respondents did not measurably differentiate their use of these areas based on the important conditions they seek in backcountry and wilderness areas and on their past experiences in the

WMNF. Simply put, these areas may appear generally very similar to the visitors. Similarly, hikers and backpackers achieve nearly the same types and amounts of satisfaction across primitive and semi-primitive non-motorized Recreation Opportunity Spectrum areas in the WMNF. This study was designed to characterize user responses across the WMNF and the ROS classes, but not to evaluate management of the areas.

Some of the results in hiker and backpacker ratings of importance and satisfaction, plus user perceived problems, suggest additional indirect visitor management actions (e.g., information to visitors about trail conditions and solitude) should be considered. Information before and during their trips appears to be a central visitor concern. Similarly, better management of crowding or high levels of user-user encounters in some areas and at some trailheads could facilitate visitor satisfactions; however, beyond suggesting that some locations are reportedly crowded, the number of interviews at any one site is not adequate to evaluate each site where interviews were conducted. At this time, direct management (e.g., limit visitor use) does not appear to be generally necessary across the seven WMNF areas studied based on this user self-reported information. However, this information must be evaluated in combination with other recreation management information that is being measured and monitored on the WMNF (e.g., user counts on trails, environmental impacts from recreational use) and in the context of the ROS standards and goals for the social, environmental, and management conditions established for these areas.

Elsewhere in this proceedings, Johnson and Dawson (2002) express concerns about the relatively high satisfaction ratings by hikers and backpackers and how to monitor these psychological and social indicators in the future. High hiker and backpacker satisfaction levels may be possible even while social and environmental conditions are degrading because visitors may use various physical and cognitive coping behaviors (e.g., physical displacement, temporal displacement, product shift, and rationalization) to maintain high satisfaction levels. Therefore, the information presented here should be used in planning and management decision-making only with other monitored information on the social, environmental, and management conditions in the WMNF.

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## **PARTICIPANTS' PERCEPTIONS OF THE 1997-1998 MISSOURI STATE PARKS PASSPORT PROGRAM**

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**Abstract:** Service quality is increasingly important to park managers. Recreation and park evaluation measures the implementation and outcome of programs for decision-making. Decisions based on evaluations are often concerned with improving the quality of the program for participants. The purpose of the study was to evaluate the Missouri State Parks Passport Program (MSPPP) by measuring the program's success in achieving the objectives and by ascertaining participants' perceptions. Based on the results, the researcher concluded that MSPPP partially achieved the objectives of the MSPPP. Most of the participants felt satisfied with the prizes of the program.

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### **Missouri State Parks Passport Program (MSPPP)**

Missouri state parks and historic sites are considered the masterpieces of the state by Missouri Department of Natural Resources Division of State Parks (MDNR DSP). To help people realize and appreciate the value of Missouri state parks and historic sites, the employees of MDNR DSP lead many activities, such as nature walks and nature education programs. The Missouri State Parks Passport Program (MSPPP) is one of these programs (Missouri Masterpieces, 1997). MDNR DSP designed the MSPPP to attract new visitors to the state parks system, promote off-peak visitation, and encourage repeat visitors to explore less known state parks and historic sites (MDNR DSP, 1995). The program includes 78 sites, 76 state parks and historic sites in Missouri and the National Frontier Trails Center in Independence and the Bruce R. Watkins Cultural Heritage Center in Kansas City which are owned by the MDNR and leased to those cities. MDNR DSP promotes the MSPPP by sending direct mail to people who completed the Camper Award Program, using statewide news releases, and distributing booklets at sport and trade shows.

Participants must visit all sites in the MSPPP and have their passport booklet stamped to verify that they completed the program. Each participant who completes this incentive program receives prizes (six theme patches, a passport banner, a \$25 gift certificate, a passport T-shirt, and five free camping coupons) from MDNR DSP (MDNR DSP, 1997a).

## **The Need for Recreation Program Evaluation**

From September 5, 1995 to December 31, 1996, 461 participants completed the 1995-1996 MSPPP (MDNR DSP, 1997b). From April 1, 1997 to April 30, 1998, 108 participants completed the 1997-1998 MSPPP (MDNR DSP, 1998). However, no evaluation exists for the program. The purpose of the study was to evaluate the MSPPP by measuring the program's success in achieving its objectives (to attract new visitors to the state parks system, promote off-peak visitation, and encourage repeat visitors to explore less known state parks and historic sites), by ascertaining participants' perceptions of the MSPPP and how participants learned about the MSPPP.

Evaluation is the key to make program planning successful (Farrell & Lundegren, 1991). The goal of evaluation is to determine the value of something so that good decisions can be made (Henderson, 1995). Researchers determined classifications of evaluation in leisure services organizations. Edginton and Hanson (1992) suggested that there are customer orientation, program orientation and organizational orientation to evaluate the recreation programs. Farrell and Lundegren (1991) indicated four classifications of evaluating programs that were administration, leadership or personnel, program and areas and facilities. Henderson (1995) described five classifications (5Ps) in evaluation: program, personnel, participant, place, and policy/administration. This study concentrated on program and participants evaluation.

Many possibilities exist for developing program evaluations (Henderson, 1995). Bennett (1982) suggested seven program evaluation levels: input (time, cost, staff), activities (type, delivery of program), people involvement (number of people, characteristics of people), reactions (satisfaction, like or dislike for activities), KASA (knowledge, attitudes, skill and aspirations) objectives and changes, practice change (application of knowledge, skill), and long-term impact on quality of life (social, economic). Henderson (1995) mentioned that trying to access everything usually results in poor conceptualizations. One of the challenges of program evaluation is to make sure that a researcher does not evaluate too many criteria at once. The seven levels identified provide a framework for making decisions about what aspects of a program may be most important to evaluate (Henderson, 1995). In the MSPPP evaluation, the researcher focused on people involvement to ascertain the participants' demographics. Additionally, the researcher focused on reactions of satisfactions to determine the participants' perception of the satisfactions.

In Rossman's (1989) survey, four models for conducting recreation program evaluation were determined. The researcher used Satisfaction-Based Evaluation to conducting in this study. Data about participants' satisfaction with program services can be used to determine the worth of program services. Participant-reported satisfaction with leisure participation is an well-accepted measure of leisure outcome (Beard & Ragheb, 1980).

Many possibilities exist for developing program evaluations (Henderson, 1995). Bennett (1982) suggested seven program evaluation levels: input, activities, people's involvement, reactions, KASA objectives and change, practice change and long-term impact on quality of life. In the MSPPP evaluation, the researcher focused on people involvement and reactions.

Effective program planning needs program promotion. Programs will succeed only if visitors are aware of what the organization is offering (Compton et al., 1980). Compton et al. (1980) mentioned there were many promotion techniques that could be used, such as newspapers, brochures, televisions and radios. Televisions and radios were increasingly important because of high accessibility. Brochures were one of the most broadly used and effective methods. In Tew et al.'s (1999) study, the recreation agencies heavily relied on printed promotional material, such as seasonal program brochures, posters, and newspapers. In addition, understanding participants' reasons for participation helps leisure service managers understand participants' needs. Moreover, successful programs not only consider participants' needs but also provide satisfying opportunities (Farrell & Lundegren, 1991). Beard and Ragheb (1980) identified variables influencing leisure satisfaction: gender, knowledge of leisure, leisure value, leisure attitude, income and age. There was a strong relationship between participants' perceptions and satisfaction. Ragheb (1980) indicated that satisfaction gained from leisure activities greatly increased participation in activities.

Demographic variables are helpful to profile visitors and affect leisure activity choice and participation (Bammel & Burrus-Bammel, 1996). In Busser et al.'s (1996) study, males were more active than females and participated in more outdoor activities.

### Methodology

The researcher collected data by a mailing survey and following by two follow-up letters. The survey contained four parts and four pages. The first part of the questionnaire included eight questions to determine how participants learned about the MSPPP, to measure the MSPPP's success

in achieving the MSPPP objectives and to ascertain participants' perceptions of the MSPPP. The participants rated the reasons from 4 (very important) to 1 (not at all important). The participants' satisfaction with the program's prizes, services and overall satisfaction with the program were 5-point scale ranging from 5 (very satisfied) to 1 (very dissatisfied). The researcher used 3-point scale for the ease of completing the program ranging from 1 (too short) to 3 (too long).

The second part of the questionnaire included participants' demographic profile. The questions included participant's sex, age, educational level, marital status, employment status, race/ethnicity and annual household income. The third part of the questionnaire was open-ended for participants' comments about the MSPPP. Participants wrote their opinions and suggestions for the MSPPP. The fourth part of the questionnaire was to determine participants who were new visitors or repeat visitors to the state parks and historic sites.

The subjects were participants who completed the MSPPP between April 1, 1997 and April 30, 1998, and who were 18 years and older. The total valid population of the study was 98. The total number of valid questionnaires for data analysis was 90. The response rate was 91.84 %.

### Results

The first part of the questionnaire includes the question of the respondents' sources of learning about the program. In Table 1, only one respondent (1.1%) learned about the program from radio and 2 respondents (2.2%) learned from news releases. The majority of the respondents (52.8%) learned about the program from other sources. In these sources, 16 respondents (34%) learned about the MSPPP from the information in state parks followed by the Missouri Resources magazine and friends.

According to the results, MDNR DSP partially achieved the objectives of the MSPPP. First, the MSPPP did not attract many new visitors to the State Parks, State Historic Sites and the other facilities. All of the participants were repeat visitors to the State Parks (Table 2). Secondly, MDNR DSP promotes off-peak visitation to the state parks.

**Table 1. Frequency and Percent of Respondents' Sources of Learning about the Program**

Sources of Learning about the Program	Frequency	Percent
Direct mail	11	12.4
Exhibit at a sport and trade show	11	12.4
Family	6	6.7
Flyer	8	9.0
Friends	16	18.0
<u>Missouri Resources</u> magazine	19	21.3
Newspaper news release	2	2.2
Poster	6	6.7
Radio	1	1.1
Other	47	52.8

In Table 3, the participants visited the sites mostly on weekends (94.4%) and weekdays (88.9%). The months with most visits were from April through August (Table 4). Third, MSPPP encouraged repeat visitors to explore less known State Parks and Historic Sites (Table 2). The participants did not visit some of the less known State

Parks and Historic Sites before participating in the program. The 1997-1998 MSPPP provided opportunities for participants to visit 78 sites. The MSPPP not only encouraged the participants to revisit sites they had already visited but also encouraged them to visit new sites.

**Table 2. Frequency of Respondents' Visitation**

Sites	New Visitors		Repeat Visitors		Total	
	N	%	N	%	N	%
State Historic Sites	12	13.6	76	86.4	88	100
State Parks	0	0.0	88	100.0	88	100
Other Facilities	13	14.6	76	85.4	89	100

**Table 3. Frequency and Percent of Respondents' Time of Visit**

Respondents' Time of Visit	Frequency	Percent
Weekdays	80	88.9
Weekends	85	94.4
Holidays	41	45.6

**Table 4. Frequency and Percentage of Participants' Visiting Months**

Participants' Visiting Months	Frequency	Percent
January	13	14.4
February	24	26.7
March	31	34.4
April	59	65.6
May	62	68.9
June	72	80.0
July	63	70.0
August	66	73.3
September	63	70.0
October	46	51.1
November	21	23.3
December	12	13.3

In Table 5, most of the participants determined "discover new places and things" and "increase my knowledge of Missouri State Parks" were very important reasons for them to participate in the program. "Develop friendships" and "use my physical abilities or skills" were the least important reasons. Most of the participants felt satisfied with the prizes and services (Tables 6 & 7). The participants (76.4%) felt very satisfied with the overall satisfaction toward MSPPP (Table 8) and thought the ease of completing the program (87.8%) was about right (Table 9).

Ninety participants responded and returned useable questionnaires. Eighty-nine participants indicated their sex, 43 males and 46 female. The average age was 55.3 years old. The largest group of participants' age was between 50 and 59. About one third of the participants had college (27%) or high school (34.8%) degrees. Most of the participants were married (87.6%) and more than half (53.9%) of them were retired. Almost all (96.6%) of the participants were White American. The largest percentage of participants' annual household income was between \$20,000-\$29,999 (28.6%) (see Table 10).

**Table 5. Frequency and Percent of Importance of Respondents' Reasons for Participation**

Reason	Perceptions										Total	M	SD
	very important		moderately important		slightly important		not at all important		Total				
	F	%	F	%	F	%	F	%	F	%			
1) avoid the hustle and bustle of daily life	32	37.6	22	25.9	18	21.2	13	15.3	85	100	2.86	1.09	
2) attracted by prizes	17	19.8	38	44.2	27	31.4	4	4.7	86	100	2.80	.81	
3) challenge my abilities	23	27.4	26	31.0	19	22.6	16	19.0	84	100	2.67	1.08	
4) develop friendships	12	14.6	27	32.9	28	34.1	15	18.3	82	100	2.44	.96	
5) discover new places and things	75	83.3	12	13.3	3	3.3	0	0.0	90	100	3.80	.49	
6) increase my knowledge of Missouri State Parks	65	72.2	21	23.3	3	3.3	1	1.1	90	100	3.67	.60	
7) relax	51	59.3	25	29.1	9	10.5	1	1.2	86	100	3.47	.73	
8) use my physical abilities/skills	10	12.0	33	39.8	25	30.1	15	18.1	83	100	2.46	.93	

**Table 6. Frequency and Percent of Respondents' Satisfaction with the MSPPP Prizes**

Prize	Perceptions										Total	m	SD	
	very satisfied		somewhat satisfied		neither satisfied nor dissatisfied		somewhat dissatisfied		very dissatisfied					
	F	%	F	%	F	%	F	%	F	%				
1) six theme patches	76	85.4	9	10.1	4	4.5	0	0.0	0	0.0	89	100	4.81	.50
2) passport banner	55	63.2	20	23.0	9	10.3	2	2.3	1	1.1	87	100	4.45	.86
3) passport T-shirt	70	77.8	17	18.9	0	0.0	1	1.1	2	2.2	90	100	4.69	.74
4) \$25 gift certificate	81	90.0	8	8.9	1	1.1	0	0.0	0	0.0	90	100	4.89	.35
5) five free camping coupons	79	90.8	6	6.9	2	2.3	0	0.0	0	0.0	87	100	4.89	.39

**Table 7. Frequency and Percent of Respondents' Satisfaction with the MSPPP Services**

Service	Perceptions										Total	m	SD	
	very satisfied		somewhat satisfied		neither satisfied nor dissatisfied		somewhat dissatisfied		very dissatisfied					
	F	%	F	%	F	%	F	%	F	%				
1) facilities' operation hours	25	8.7	43	49.4	4	4.6	14	16.1	1	1.1	87	100	3.89	1.04
2) employees' helpfulness at state parks and historic sites	66	4.2	20	22.5	0	0.0	2	2.2	1	1.1	89	100	4.66	.71
3) locations of facilities to obtain stamps	30	4.5	33	37.9	3	3.4	19	21.8	2	2.3	87	100	3.80	1.20
4) procedure for obtaining prizes	71	0.7	13	14.8	3	3.4	1	1.1	0	0.0	88	100	4.75	.57
5) procedure for obtaining stamps	32	6.4	29	33.0	6	6.8	20	22.7	1	1.1	88	100	3.81	1.19

**Table 8. Frequency and Percent of Respondents' Overall Satisfaction with the MSPPP**

Overall Satisfaction with the MSPPP	Frequency	Percent
Very satisfied	68	76.4
Somewhat satisfied	18	20.2
Neither satisfied nor dissatisfied	1	1.1
Somewhat dissatisfied	0	0.0
Very dissatisfied	2	2.2
Total	89	100.0

m=4.69, SD=.717

**Table 9. Frequency and Percent of Respondents' Satisfaction with the Ease of Completing MSPPP**

Satisfaction with the ease of completing MSPPP	Frequency	Percent
Too short	2	2.2
About right	79	87.8
Too long	9	10.0
Total	90	100.0

**Table 10. Frequency and Percent of Respondents' Demographics**

Demographics	Frequency	Percent	Demographics	Frequency	Percent
Sex			Employment status		
Male	43	48.3	Employed full-time	30	33.7
Female	46	51.7	Employed part-time	4	4.5
Age			Full-time homemaker	4	4.5
21-29	4	4.7	Retired	48	53.9
30-39	5	5.9	Student	0	0
40-49	8	9.4	Unemployed	3	3.4
50-59	30	35.3	Ethnicity		
60-69	28	32.9	African American	0	0
70-79	10	11.8	Asian	0	0
Education			Latino	0	0
Less than 12 <sup>th</sup> grade	8	9.0	Native American	3	3.4
High school graduate or equivalent	31	34.8	White American	84	96.6
Some college	24	27.0	Household Income		
Associate degree	9	10.1	Less than \$9,999	3	4.3
Bachelor's degree	7	7.9	\$10,000-\$19,999	10	14.3
Master's degree	7	7.9	\$20,000-\$29,999	20	28.6
Professional school degree	3	3.4	\$30,000-\$39,999	12	17.1
Doctoral degree	0	0	\$40,000-\$49,999	7	10.0
Marital status			\$50,000-\$59,999	5	7.1
Single	11	12.4	\$60,000-\$69,999	5	7.1
Married	78	87.6	\$70,000-\$79,999	5	7.1
			\$80,000 or more	3	4.3

## Discussion and Implications

More than half of the participants learned about the program from the information in parks. Other sources were not very effective. That might be the reason why MSPPP attracted more repeat visitors than new visitors. The researcher suggests that MDNR DSP establish different promotion strategies based on the differences of the areas, demographics, and motivations. The researcher recommends that MDNR DSP use more brochures to promote the MSPPP. Tew et al. (1999) suggested that seasonal program brochures were the most widely used for promoting programs and the remaining efforts were devoted to non-printed sources, such as word of mouth, television and radio. The researcher recommends that MDNR DSP promote the program on the MDNR DSP web page.

Second, based on the importance score of the reasons for participating in the MSPPP, the participants felt that "discover new places and things" and "increase my knowledge of Missouri State Parks" were the most important reasons for participating in the program. MDNR DSP needs to promote "discover new places and things" and "increase my knowledge of Missouri State Parks". This might encourage more people to participate in the program.

Third, based on the conclusions of the prizes satisfaction score, most of the participants felt satisfied with camping coupons, the \$25 certificate and patches. MDNR DSP should keep and promote these prizes. However, compared to other prizes, "passport banner" and "passport T-shirt" had lower scores. MDNR DSP should consider eliminating these prizes.

Fourth, in the MSPPP services, the participants were very satisfied with the "procedures for obtaining prizes" and "employees' helpfulness at state parks and historic sites". However, "locations of facilities to obtain stamps", "procedure for obtaining stamps" and "facilities' operation hours" had lower satisfaction scores than other services. MDNR DSP needs to provide accurate directions and clearer signs to each site. Some of the sites on the list that MDNR DSP provided are not correct. Some participants needed to seek assistance to find some sites and passport stamps. The researcher suggests that MDNR DSP check the direction list and make sure the list is accurate. The participants can only obtain the stamps during the operation hours. The researcher suggests that MDNR DSP find a way for the participants who do not visit the sites in the operation hours to get stamps.

Fifth, demographic variables affect leisure activity choice and participation (Bammel & Burrus-Bammel, 1996). Therefore, making a passport-tracking list is important. If MDNR DSP leaves the name, age, gender, whom did they participate with and address of the intended participants who requested the passport booklet, it would be more efficient for future researchers to study the program. It is also a benefit to MDNR DSP to track who completed the MSPPP and who did not complete the program. It is important to know the reasons why people did not complete the program.

Sixth, MSPPP attracted more White Americans, married, and less educated participants. There were very few minorities, single, younger, above some college degree, and higher income participants. Moreover, there were no students who completed the program. MDNR DSP should target these people for marketing.

Seventh, MDNR DSP may evaluate Missouri parks system by the participants who completed the program. All of the participants visited all the sites in Missouri. Their suggestions may be valuable to MDNR DSP for improving park facilities or settings. If MDNR DSP plans to continue MSPPP, the participants should evaluate the program annually.

Eighth, most of the participants felt satisfied with MSPPP. The participants described the program as a wonderful, educational, enjoyable, and fun program. Some participants also mentioned that it is also a good family activity and provides chances to know some nice parks they haven't known. They will bring family and friends to participate in the program in the future. The researcher and participants suggest that MDNR DSP should continue the program.

Based on the participants' comments, the participants suggested some recommendations for MSPPP. First, many participants mentioned that many stamp ink pads were dry or missing. Some of the participants also had problems getting the stamps after operation hours. The researcher suggests that MDNR DSP check the ink pads and stamps often and also mentions to the participants where to get the stamps after operation hours.

Second, the passport signs were not very clear. Some participants had a hard time finding the MSPPP signs. The researcher suggests that MDNR DSP make the signs at each site clear.

Third, some participants preferred more free night stays in the parks. The researcher suggests that MDNR DSP give more free camping coupons to participants.

Based on the results of the study and the literature, the researcher made the recommendations for the future studies and future researchers. First, constraints are the factors that are perceived by individuals to inhibit or prohibit participation and enjoyment in leisure (Jackson, 1993). Constraints to leisure participation have captured leisure researchers' attention for several decades because of the role constraints play in leisure decision making. Crawford and Godbey (1987) initially termed leisure as factors that could deter leisure participation and create difficulties to realize the beneficial effects of this participation (Crawford & Godbey, 1987). Future studies about constraints may determine the reasons why people do not participate in the program.

Farrell and Lundegren (1991) indicated four classifications of evaluating programs (administration, leadership or personnel, program and areas and facilities). Henderson (1995) described five classifications (5Ps) in evaluation: program, personnel, participant, place, and policy/administration. Henderson (1995) mentioned that trying to access everything usually results in poor

conceptualizations. This study only concentrated on program and participants evaluation. Future researchers should evaluate the program in the other classifications.

Martilla and James (1979) and Guadagnolo (1985) stated that Importance-Performance Analysis (I-P) is a useful technique for measuring the desirability of product attributes. This I-P is based on research findings indicating that participants' satisfaction is a function of participants' expectations about attributes of a program they consider important and participants' judgments about agency performance on these attributes (Rossman, 1989). In I-P, participants are given a pretest before participating in a program to determine which program attributes are important to them. After participation, the participants are given a posttest with the same items. The process is to determine how well the agency performed in delivering the program attributes (Rossman, 1989). The results of the pre and post measurements are plotted on a two-dimensional matrix. The researcher recommends that I-P would be another evaluative model for evaluating the program. The model determines which item needs the most improvement based on how important the item is and how satisfied the participants feel. The results would help MDNR DSP in its decision-making.

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