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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.

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, 1st 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 1st 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 2nd 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.

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).

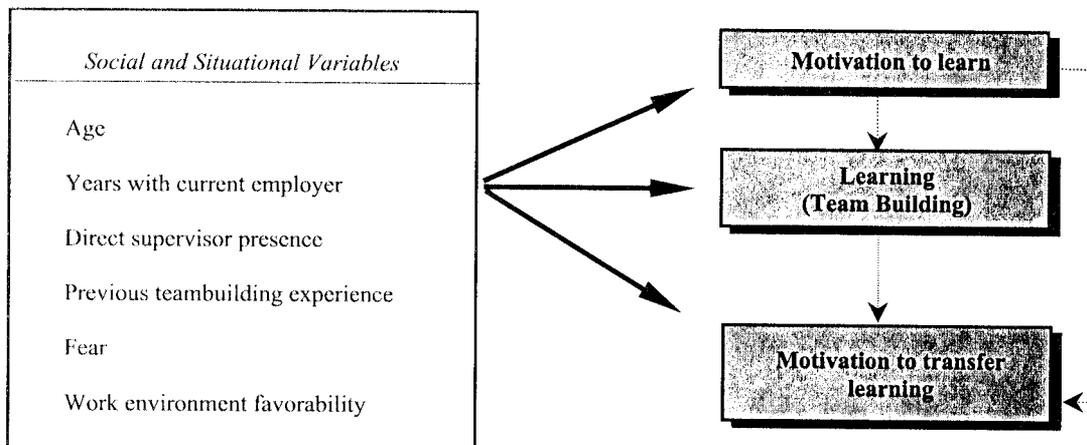


Figure 1. Hypothesized Influences Affecting Trainability in Outdoor-based Training

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 ² =.084 | | R ² =.241 | | R ² =.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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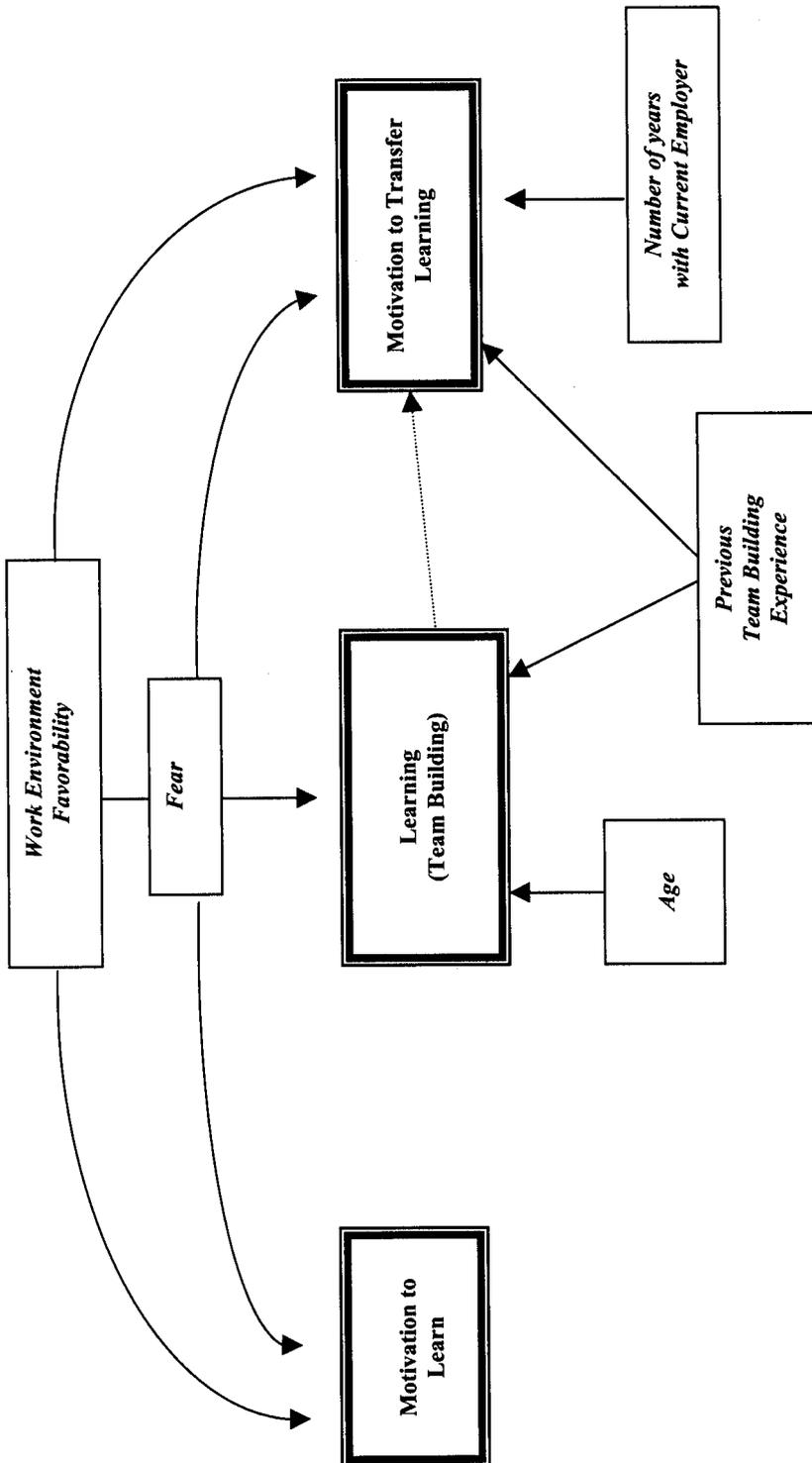


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USE OF EXPERIENCE SAMPLING METHOD TO UNDERSTAND THE WILDERNESS EXPERIENCE

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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.

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 ² | R ² 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.

Small canoes are 16-foot, two-person canoes.

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 DEVELOPMENT¹

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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.

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.)

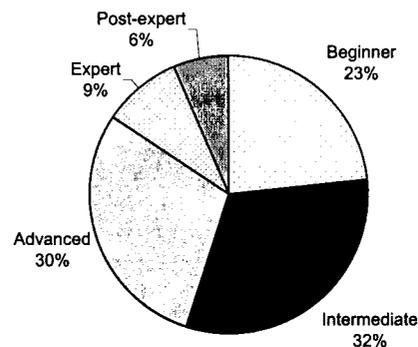


Figure 1. Level of Development

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)**

| Factor Name and Item Content/Loading | Factor 1: <i>Personal Challenge</i> | Factor 2: <i>Stature</i> | Factor 3: <i>Escape</i> | Factor 4: <i>Learn</i> | Factor 5: <i>Adventure</i> | Factor 6: <i>Social Interaction</i> |
|---|--|-------------------------------------|------------------------------------|-----------------------------------|---------------------------------------|--|
| 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 |
| Eigenvalue | 7.15 | 2.32 | 1.60 | 1.60 | 1.08 | 1.01 |
| Proportion of variance explained | 29.8% | 9.7% | 6.7% | 5.1% | 4.5% | 4.2% |
| Cumulative variance explained | 29.8% | 39.5% | 46.2% | 51.3% | 55.8% | 60.0% |
| Mean scale importance score | 2.7 | 2.7 | 3.3 | 3.5 | 3.9 | 3.0 |
| Cronbach's alpha | .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) | | | |
| FACTOR 1: PERSONAL CHALLENGE | | | | | | | | | |
| To show myself that I can do it | 2.61 | 2.77 ^a | 2.67 ^{ac} | 2.51 ^{bc} | 2.27 ^b | 2.71 ^{ac} | 6.28 | .0001 | 4 |
| Because I thought it would be a challenge | 2.69 | 3.18 ^a | 2.84 ^b | 2.35 ^c | 2.03 ^c | 2.63 ^{bc} | 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 ^a | 1.76 ^a | 1.68 ^{ab} | 1.38 ^b | 1.81 ^{ab} | 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 ^{ab} | 3.40 ^a | 3.25 ^{ab} | 2.97 ^b | 3.56 ^a | 2.67 | .05 | 2 |
| FACTOR 2: STATURE | | | | | | | | | |
| To see historically significant shipwrecks | 2.72 | 2.29 ^a | 2.58 ^b | 2.96 ^c | 3.12 ^{cd} | 3.30 ^d | 33.95 | .0001 | 8 |
| To share my skill and knowledge with others | 3.16 | 2.41 ^a | 2.96 ^b | 3.58 ^c | 3.83 ^c | 3.93 ^c | 37.59 | .0001 | 7 |
| To use my equipment | 2.74 | 2.15 ^a | 2.46 ^b | 3.01 ^c | 3.72 ^d | 3.53 ^d | 40.64 | .0001 | 9 |
| To collect interesting artifacts | 2.56 | 2.17 ^a | 2.59 ^b | 2.78 ^b | 2.64 ^b | 2.76 ^b | 7.42 | .0001 | 4 |
| To help keep me physically fit | 2.38 | 2.10 ^a | 2.17 ^a | 2.62 ^b | 2.52 ^{ab} | 3.13 ^c | 11.95 | .0001 | 5 |
| To do something creative, such as take pictures or videos | 2.76 | 2.41 ^a | 2.72 ^b | 2.89 ^b | 2.94 ^b | 3.33 ^c | 8.60 | .0001 | 5 |
| | 2.74 | 2.49 ^a | 2.61 ^a | 2.87 ^{ab} | 3.09 ^b | 3.13 ^{ab} | 5.53 | .001 | 4 |
| FACTOR 3: ESCAPE | | | | | | | | | |
| For relaxation | 3.27 | 3.05 ^a | 3.27 ^b | 3.38 ^b | 3.27 ^{ab} | 3.57 ^b | 5.77 | .0001 | 3 |
| For a change from everyday life | 3.58 | 3.17 ^a | 3.61 ^b | 3.76 ^b | 3.75 ^b | 3.82 ^b | 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 ^a | 3.36 ^{ab} | 3.46 ^{ab} | 3.49 ^{ab} | 3.73 ^b | 2.84 | .05 | 1 |
| | 2.76 | 2.60 ^a | 2.72 ^{ab} | 2.86 ^{ab} | 2.69 ^{ab} | 3.11 ^b | 2.67 | .05 | 1 |
| FACTOR 4: LEARN | | | | | | | | | |
| To learn more about the underwater environment | 3.54 | 3.42 ^a | 3.50 ^{ab} | 3.64 ^b | 3.65 ^{ab} | 3.59 ^{ab} | 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 ^a | 2.58 ^{ab} | 2.79 ^b | 2.99 ^b | 2.80 ^{ab} | 4.48 | .001 | 2 |
| | 3.60 | 3.42 ^a | 3.54 ^{ab} | 3.74 ^b | 3.81 ^b | 3.64 ^{ab} | 3.84 | .01 | 2 |
| FACTOR 5: ADVENTURE | | | | | | | | | |
| For the adventure of it | 3.92 | 3.74 ^a | 3.92 ^{ab} | 4.03 ^b | 4.00 ^{ab} | 3.92 ^{ab} | 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 ^a | 4.10 ^b | 4.26 ^b | 4.35 ^b | 4.30 ^b | 9.30 | .0001 | 4 |
| | 3.77 | 3.61 | 3.80 | 3.87 | 3.75 | 3.76 | 1.84 | .12 | n.s. |
| FACTOR 6: SOCIAL INTERACTION (So I could do things with my friends and/or family) | 2.96 | 2.93 ^{ab} | 3.12 ^a | 2.92 ^{ab} | 2.62 ^b | 3.00 ^{ab} | 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.

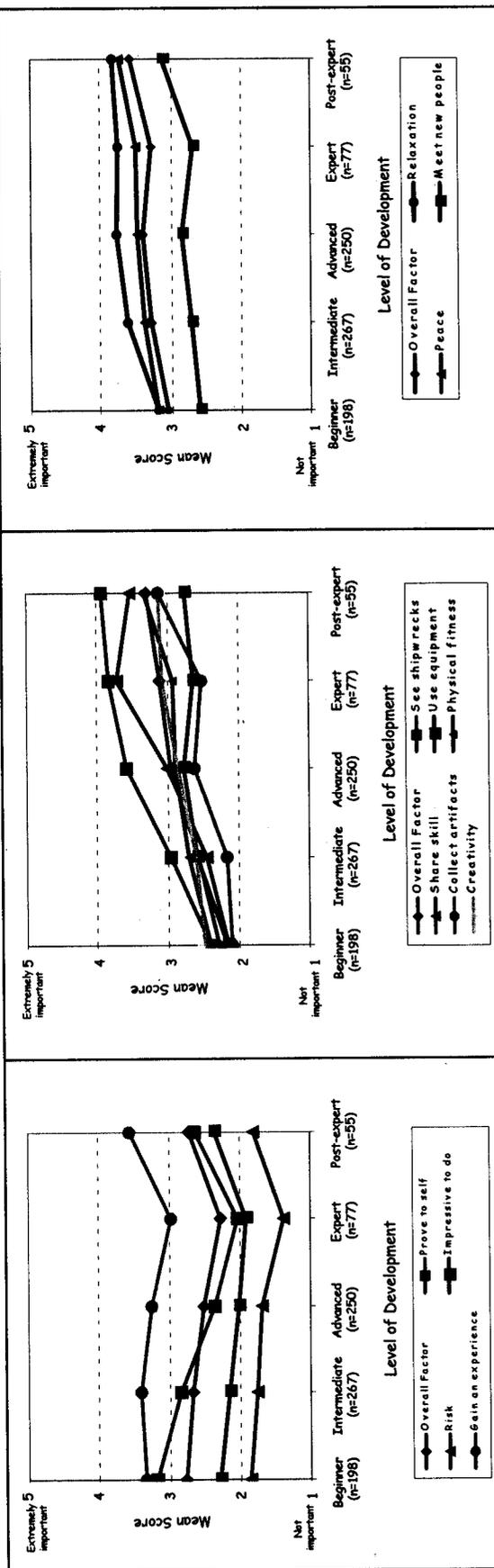


Figure 2a. Personal Challenge Factor by Level of Development

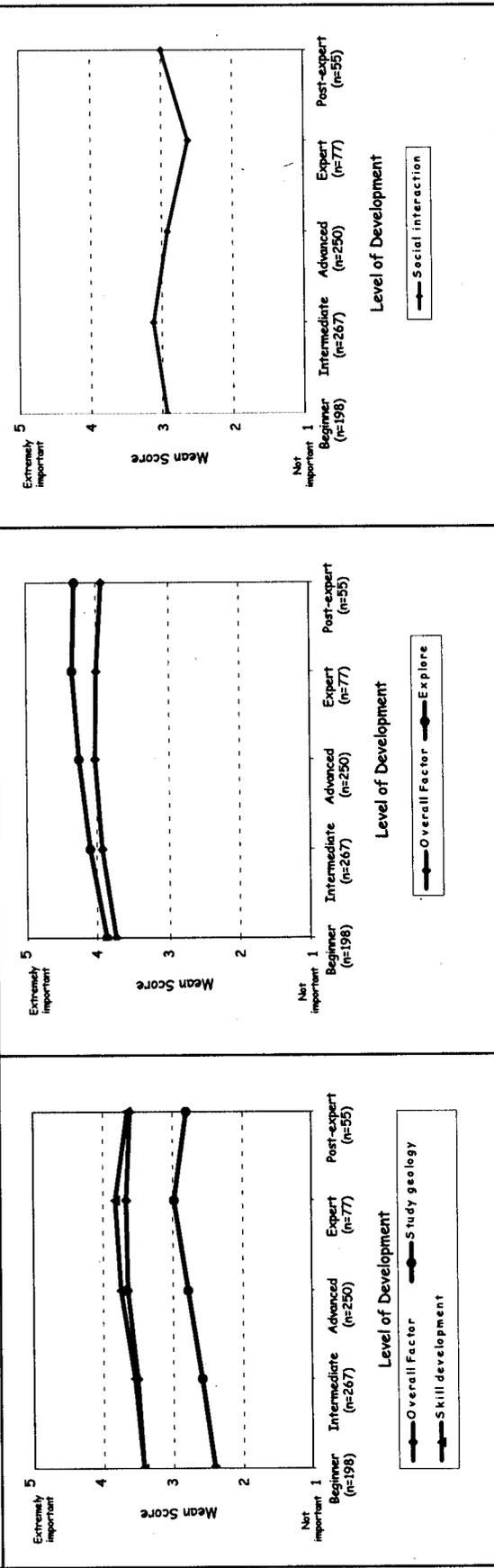


Figure 2b. Stature Factor by Level of Development

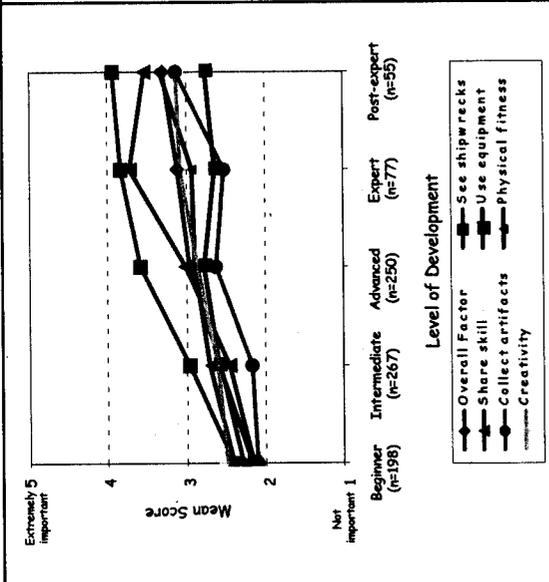


Figure 2c. Escape Factor by Level of Development

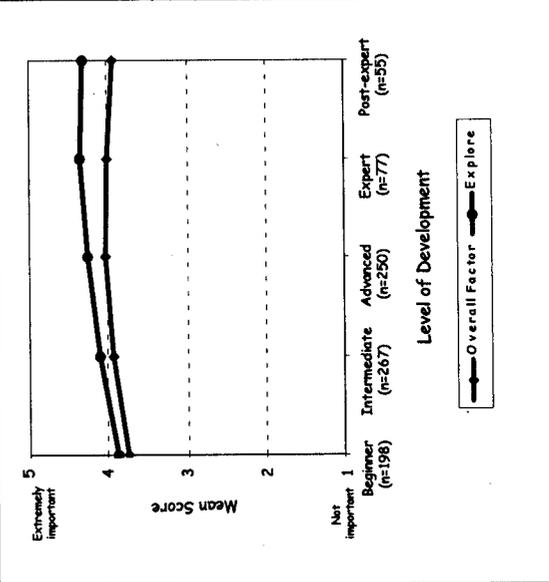


Figure 2d. Learn Factor by Level of Development

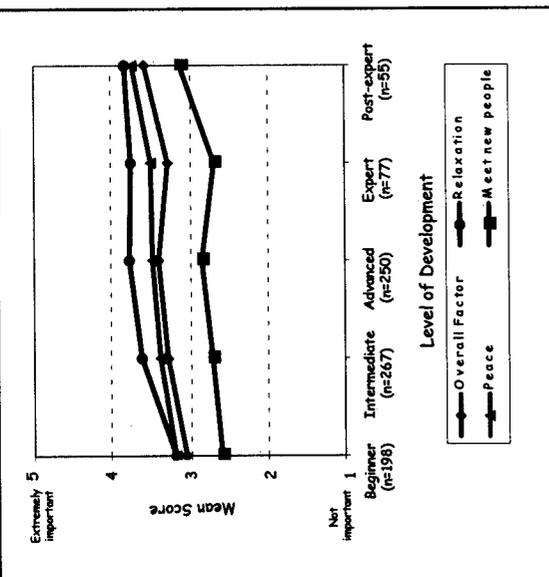


Figure 2e. Adventure Factor by Level of Development

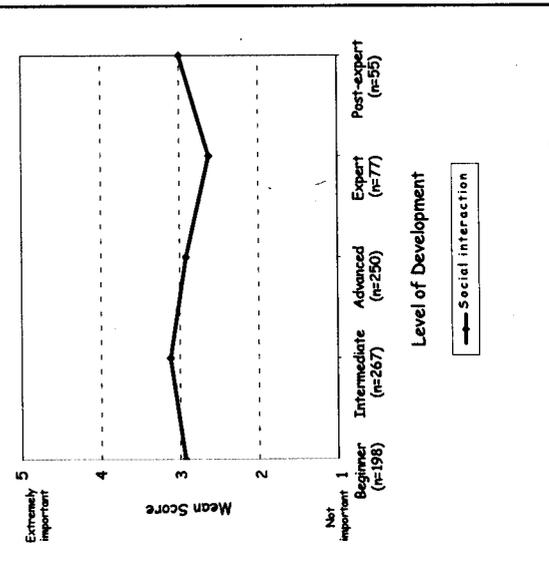


Figure 2f. Social Interaction Factor by Level of Development

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.

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 ^a (N=29) | | Post-trip ^a (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 |

^a 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.

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.

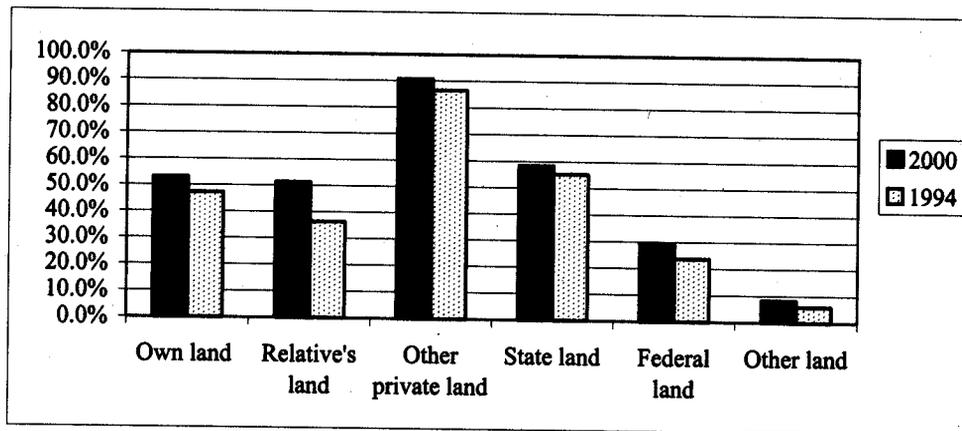


Figure 1. Ownership of Lands that Trappers Utilize

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. |
|--------------------------------|-------|----------|--------|------|
| Total days trapping | | | | |
| 2000 | 64.05 | 56.66 | 41.766 | .000 |
| 1994 | 39.20 | 37.36 | | |
| Total species harvested | | | | |
| 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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