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The Benefits of Outdoor Recreation: Exploring the Benefits of Wilderness River Rafting

by
John W. Colton 

A Thesis
submitted to the faculty of Graduate Studies and Research
in partial fulfillment of the requirements
for the degree of
MASTER OF ARTS

Department of Geography
Edmonton, Alberta
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled THE BENEFITS OF OUTDOOR RECREATION: EXPLORING THE BENEFITS OF WILDERNESS RIVER RAFTING submitted by John W. Colton in partial fulfillment of the requirements for the degree of MASTER OF ARTS.

Dr. E.L. Jackson

Dr. R.G. Ironside

Dr. T.D. Hinch

August 18, 1995

Abstract

Most research concerning recreation benefits, published and unpublished, has been largely theoretical and conceptual in nature. Although it is reasonable to expect that people benefit from participation in recreation activities such as hiking, canoeing, and camping, little empirical research has focused on these benefits. The purpose of this study was to clarify and confirm theoretical dimensions of outdoor recreation benefits through empirical measurement. In addition, the research sought to contribute to the body of knowledge regarding benefits theory. Using results from the administration of a 74-item modified recreation experience preference scale to 92 respondents at the beginning and end of 12-day raft trips on the Tatshenshini River in British Columbia, Yukon, and Alaska, this study quantified the specific benefits that people both anticipated and realized from their participation. Factor analysis of the anticipated benefit items partially verified a taxonomy of personal benefits proposed by Schreyer and Driver (1989), resulting in eight domains. In rank order of importance to trip participants, these domains were *Nature/Outdoors*, *Adventure/Risk*, *Physical Health and Exercise*, *Escaping Routine*, *Well-being*, *Family Bonding*, *Personal Confidence*, and *Social Skills*. In addition, using these empirical results, the study sought to determine if the respondents benefited from their participation in the raft-trips, and in what ways. This objective was accomplished by constructing a matrix of both the items and the dimensions of anticipated and realized benefits. The matrixes enabled a glimpse of those anticipated benefit items and dimensions that were "Well-Above Expectations," "Above Expectations," "Just Above Expectations," and "Met Expectations" in terms of realization. Implications of this research are discussed in terms of its empirical support of benefits theory and application toward recreation resource management.

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Introduction: Benefits of Recreation

Geography and Recreation

Traditionally, geography has been divided along two lines of scientific pursuit: physical and human. While physical geography has stressed the need to examine and understand our physical environment in and of itself, human geography has sought to understand our natural and built environments as they relate to the human interactions which occur within them. These human interactions, often complex, offer geographers a wide variety of options for study. For example, while some geographers may choose to study urban or population issues, others may choose, instead, to focus on recreational and leisure topics.

The field of recreation and leisure studies, while benefiting from the insights provided by geographers (e.g., Coppock, 1982; Patmore & Collins, 1980; Smith, 1983), has also grown in part from other social science perspectives, such as those provided by sociology and psychology (Burdge, 1989; Burton & Jackson, 1989). Collectively, these three perspectives have raised many issues in the field of recreation and leisure research. For instance, studies have been initiated concerning motivations for recreation and leisure participation (Crandall, 1980; Iso-Ahola, 1989), satisfaction from participation (Mannell, 1989), and more recently, constraints to recreation participation (Jackson, 1991). These studies and others have provided an understanding of recreation and leisure phenomena. However, very little has been offered in terms of understanding the *benefits* of recreation.

Recreation Benefits

The theory of recreation benefits has only recently begun to emerge, but despite this emergence, little empirical knowledge has been gained. What little is known has been inferred from other areas within recreation and leisure studies (Schreyer & Driver, 1989). In addition, what has not been inferred from other studies has been theorized at recreationand leisure conferences and symposiums.

There are two main reasons for this slow emergence (Driver, 1986; Schreyer &

Driver, 1989). First, most public agencies do not promote the idea of recreation benefits. This is due largely to the fact that these agencies are heavily weighted with biological and physical scientists who do not perceive the value of social research. Secondly, the term "benefit" has been monopolized by economists, who equate benefits with consumers' "willingness to pay." While economists view benefits as an "improved condition" reflecting the expectations consumers may have of certain goods and services, recreation and leisure professionals view *recreation* benefits as an "improved condition" as a result of recreation participation.

Although empirical observation and measurement is scarce, as noted above, the field of recreation benefits research is rich in theory and conceptualization. Beginning in the 1970s (Driver 1976), recreation benefits were discussed and defined more explicitly. This was driven by the need to create objective measures for recreation resource allocation purposes. In the 1980s, attention focused on categorizing recreation benefits into several types of taxonomies, such as personal benefits and environmental benefits (Driver, 1986; Driver, Nash, & Haas, 1987; Schreyer & Driver, 1989). These far-ranging taxonomies reflected the broadening definition of a recreation benefit as "a desirable change of state; it is a specified improvement in condition or state of an individual or group of individuals, of a society, or even of non-human organisms" (Driver et al., 1987, p. 295).

Schreyer and Driver's (1989) chapter in Jackson and Burton's (1989) *Understanding Leisure and Recreation: Mapping the Past, Charting the Future* consolidated and reviewed the then-current state of knowledge regarding benefits. These authors repeatedly emphasized that any future research regarding recreational benefits should be conducted systematically and empirically. As a result, the present research focuses on the measurement of recreation benefits through empirical methods in hopes of contributing to, and gaining a better understanding of, the theory of recreation benefits.

Anticipated and Realized Benefits

The main purpose of the present research was to clarify and confirm the theoretical dimensions of recreation benefits postulated by Schreyer and Driver (1989). This objective

was accomplished by measuring the anticipated and realized benefits of participants in five 12-day wilderness raft-trips in northern Canada, utilizing pre-trip and post-trip self-administered questionnaires.

The results of the research are divided into two papers, each addressing the general purpose of the study, as well as more specific objectives related to the individual paper. The first paper attempts to clarify and refine the benefit domains highlighted by Schreyer and Driver (1989). This is done through analysis of the pre-trip questionnaire, which measured the anticipated benefits of the wilderness raft-trips. The second paper, extended the findings of the first, examines the results of the post-trip questionnaire and seeks to determine if the participants of the raft-trips did indeed realize their pre-trip anticipations.

A Personal Note

Throughout my adult life, I have maintained a significant and consistent interest in northern wilderness areas and the recreational activities that take place within them. My passion for these areas has manifested itself in several forms. For the last seven summers I have guided two-week wilderness tours involving rafting and sea-kayaking in numerous areas in the Canadian north. In addition, I have actively taken part in conservation efforts to maintain certain areas in their pristine wilderness state for others to enjoy. Finally, in this thesis, I have focused academically on recreation and leisure issues by examining the benefits derived from outdoor recreation participation.

Researching recreation benefits may seem trivial in comparison with other social issues confronting individuals and society on a day-to-day basis, but if one considers life without recreation opportunities, a bleak picture will most likely emerge. Chappelle (1973) has noted that outdoor recreation is a human need, where one derives physical and psychological benefits through one's participation. My experience as a river-guide has shown this to be true. For instance, on river trips in the Canadian wilderness, participants have been able to break free from their daily routines of work and the related stress, and in a sense re-create themselves through new and challenging adventures. It is with this insight

that I began my research into the benefits of recreation.

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Recreation Benefits:
Refinement and Clarification of Benefit Dimensions
Introduction

It has long been assumed that people benefit from the recreation and leisure activities in which they participate (Driver, 1986; Schreyer & Driver, 1989; Melamid, Meir, & Samson, 1995). A body of literature concerning recreation benefits has recently begun to emerge (e.g., Driver, Brown & Peterson, 1991), but this literature has been largely theoretical and conceptual in orientation. While it may be reasonable to expect that people benefit from their engagement in activities such as hiking, canoeing, and camping, very little published work exists which verifies *empirically* that benefits do indeed accrue from recreation participation, what these benefits might be, and how they vary among different recreational pursuits. Thus, as Schreyer and Driver (1989, p. 386) have observed, "when the question is directed at how well researchers have scientifically documented the nature of [recreation] benefits ... the answer is, not very well."

Most of our empirical knowledge about recreation benefits has come from other aspects of recreation research. For example, studies on motivations for recreation (e.g., Iso-Ahola, 1989) and leisure satisfaction (e.g., Mannell, 1989) provide information about why people participate (their anticipated benefits) and what they achieve in participation (their realized benefits). Thus, while it is possible to draw inferences about benefits from research of this kind, we can only do so indirectly. Leaders in recreation and leisure studies are now arguing, therefore, that it is not sufficient to rely on such indirect inferences, but are calling for empirical research in which recreation benefits are investigated *directly* (Melamid et al., 1995; Schreyer & Driver, 1989).

This study attempts to shed light on the understanding of recreation benefits through empirical measurement in an attempt to fill the "void" in current knowledge. More specifically, through use of a modified Recreation Experience Preference scale (Knopf, 1972; Driver, 1977), the study comprises an effort to clarify and refine dimensions of wilderness recreation benefits proposed by Schreyer and Driver (1989). These benefit domains were labelled by Schreyer and Driver as *Personal Development, Social Bonding,*

Therapeutic/Healing, Experiential, Independence/Freedom, Stimulation, Physical Fitness/Health, and *Relations with Nature*.

Background to the Study

Investigation of the benefits of leisure and recreation may appear to be a relatively new development in leisure studies. However, this is not entirely true if one acknowledges the prior development of recreation experience preference scales and their application in recreation resource management. This development was further intensified with the need for recreation resource managers to quantify recreation experiences in non-economic terms (Schreyer & Driver, 1989). It is on this foundation that the theory of benefits has emerged. The following discussion highlights this background.

Experience Preferences and the ROS

The theory of recreation benefits was preceded by empirical work using experience preference items (Knopf, 1972) and Recreation Experience Preferences (REP) scales developed by Driver (1977). Driver's REP scales consisted of 39 items representing 19 domains, such as *Escaping Social Pressures*, *Relaxing*, and *Enjoying Nature*. These scales were developed in an attempt to identify and measure the psychological benefits that can accrue to individuals who participate in specific recreation activities. For example, research investigating the preferred psychological outcomes of recreational fishing (Driver & Cooksey, 1977) demonstrated that the best measure of fishing quality came from those doing the fishing, and not necessarily from those responsible for managing the fishing resource. In addition, it was found that the experiences most preferred do not differ by activity from one location to the next as long as certain criteria are met. These criteria include similar physical setting, similar social composition among participants, and consistent management agendas.

A study by Brown and Haas (1980) examined wilderness recreation experiences and how those experiences are associated with certain user groups. Based on Driver's (1977) REP scales, a questionnaire was developed which contained measures of

psychological outcomes. From their sample of 264 people, five types of wilderness users emerged, from the traditional user to the opposite extreme of the non-traditional user. Brown and Haas stressed that this kind of information could be used in several ways, including devising and selecting management objectives, as well as organizing and conducting recreation inventories.

Experience preference studies (Brown & Haas, 1980; Driver & Cooksey, 1977; Driver & Knopf, 1977), which examined both the experiences gained from certain activities and the types of environments in which certain experiences could be attained, were critical in the development of the Recreation Opportunity Spectrum (ROS). The ROS offered a systematic method with which to manage recreation resources. This type of approach was recognized in the 1960s by many researchers, particularly Nash (1967), who saw the need for management of recreation settings based on desired recreation opportunities. Nash outlined such an approach by differentiating among recreation settings, such as wilderness (primeval), civilized (paved), and rural (pastoral). However, it was Stankey (1977) who actually suggested that polar ends of the recreation spectrum could exist which can take into account the spatial requirements for the different types of opportunities at either end of the poles as well as those in between.

Through this early research the ROS emerged. Essentially based on 14 tenets (Driver, Brown, Stankey, & Gregoire, 1987), the Recreation Opportunity Spectrum "involves specifying recreational goals in terms of broad classes of recreational opportunity, identifying specific indicators of these opportunities that permit their operational definition and defining specific standards for each indicator that make distinctions among opportunities possible" (p. 204). This definition, in effect, allowed for optimal management where specific desired opportunities among recreationists were incorporated into the land-use planning process by resource managers.

Yuan and McEwen (1989) used REP scales to determine if experience preferences among distinct ROS classes differed. Their study attempted to evaluate empirical evidence for the assumption that visitors in different ROS settings will have different types of experiences. Participants were asked to rank, on a 7-point scale, 31 experience items adapted from Driver's (1977) previous work: the outcome showed that, overall, the 31

experience variables differed little among ROS settings. In turn, this finding suggested that certain settings may not follow ROS guidelines, and more importantly, that certain experiences can be derived from more than one ROS setting.

Some studies (e.g., Virden & Knopf, 1989) utilized REP scales to examine important principles upon which the ROS is based. In this case, experience preferences were used to test one of the underlying tenets of the ROS spectrum, namely that relationships exist among outdoor recreation activity styles, desired psychological experiences, and preferred environmental settings. As part of Virden and Knopf's study, participants were asked to rate the importance of 37 items which represented the domains developed by Driver (1977). Some of these items were "Being close to nature," "Getting away from the usual demands of life," and "Sharing what you have learned with others." Factor analysis resulted in eight factors, which Virden and Knopf thought were appropriate for their study group based on the context of the research. The results showed that relationships did exist among the variables in the study but, because of the complex nature between activity preferences, desired experiences, and environmental setting preferences, Virden and Knopf were unable to verify their hypothesis. This was due in part to the lack of literature of a theoretical or empirical nature which would have provided an interpretative framework.

Theoretical Background of Benefits

With the incorporation of experience preference scales in its implementation, the Recreation Opportunity Spectrum was an essential step in the evolution of recreation and leisure benefits theory. Another major catalyst for progress in benefits research stemmed from a perceived need to describe and measure recreation experiences in terms other than solely economic ones, i.e., to "re-capture" the concept of benefit from the purely economic definition which had become attached to it. This became increasingly important as the demand for public resources from industry dependent on the raw materials found in natural areas increased (Schreyer & Driver, 1989). Managers of these resources were forced to examine and account for the activities which they permitted on the lands under their

responsibility. While it was relatively easy to pinpoint the economic benefits from timber cutting or coal mining, incorporating the experiences of recreationists into cost-benefit analyses posed a far more difficult problem: the benefits from these experiences are intangible, difficult to measure, and usually taken for granted.

In 1976, Driver defined recreation benefits as "how participation in recreation activities enhances or improves the user's ability to function more effectively after having participated" (p. 163). Recreation was seen as a way to fill the "gap between an existing state and one that is more preferred" (Driver, 1976, p. 171). Driver explained the "gap" as, for example, someone who is in a state of bliss but wants more bliss. The benefit derived would be the closing of the gap as one moves from a present state to a desired one. Thus, Driver's conceptual exploration of recreation benefits was largely confined to the human-oriented benefits of outdoor recreation, and in particular the psychological, sociological, and physiological benefits derived from participation.

Research in benefits continued to move forward at least at the conceptual stage with the categorization of benefits into four groups which were personal, social, economic, and environmental (Driver, 1986). With input from other outdoor recreation researchers, these categories were applied to various outdoor settings, such as wilderness (Driver, Nash, & Haas, 1987). At this point "benefit" was redefined as "a desirable change of state; it is a specified improvement in condition or state of an individual or a group of individuals, of a society, or even of non-human organisms" (Driver, Nash, & Haas, 1987, p. 295). This new definition expanded the range of benefits which in turn emphasized the need for empirical research to document these benefits.

Schreyer and Driver's (1989) chapter in Jackson and Burton's *Understanding Leisure and Recreation: Mapping the Past, Charting the Future* reviewed the then-current state of knowledge regarding benefits. Schreyer and Driver had three objectives in their work: to summarize what was already known; to point out the lack of empirically supported knowledge about benefits; and to encourage future research in benefits to fill the empirical void. This was accomplished largely by compiling and referring to taxonomies of benefits which were, for the most part, based on speculation or inference from previous research.

Table 1, adapted from Driver & Brown (1987), lists 35 recreation experience

preference items and 17 domains thought to comprise personal benefits. These scales, although slightly modified through subsequent research, are very similar to Driver's (1977) earlier REP scales. Schreyer and Driver's table of "Personal Recreation Benefits" (Table 2) consists of a list of personal benefits derived from open-ended interviews at the Delaware Water Gap National Recreational Area and the Upper Delaware Scenic and Recreational Rivers. Other benefit domains, such as social, economic, and environmental, were illustrated in tables designed to demonstrate the broadening of benefits theory (Schreyer & Driver, 1989). Driver, Nash, and Haas's (1987) work highlighted potential wilderness benefits. This study was unique in that it broadened the range of benefits and to whom or to what those benefits might accrue.

However, the underlying emphasis of all of this work was its "soft" scientificity, since the majority of these tables had been developed far from recreational settings, in meetings and symposiums. This limitation was clearly understood by Schreyer and Driver, and therefore led to one of the major purposes of their review, namely to encourage more empirical research to support and substantiate the theory that had been developing around the theoretical concept of recreation benefits.

In 1990, the *Journal of Leisure Research* dedicated an entire issue to articles on recreation and leisure benefits. All the papers in this special issue were adapted from Driver, Brown, and Peterson's (1991) edited book, *Benefits of Leisure.* This book examined a wide range of benefits, ranging from the learning benefits of leisure (Roggenbuck, Loomis, & Dagostino, 1990) and the developmental benefits of play for children (Barnett, 1990) to the psychological and social benefits of sport and physical activity (Wankel & Berger, 1990). The reviews examined how the understanding of benefits can enhance knowledge and understanding of various activities outside of outdoor or wilderness recreation.

Unfortunately, the underlying aspect of the reviews in *Benefits of Leisure* was that all papers were reviews of already existing reviews. "Overall, the authors found that little conclusive scientific knowledge concerning the scientific state of knowledge about the benefits of leisure exists except for a few specific types of benefits (e.g.. health-related benefits of physical activity). Nevertheless, there is considerable evidence from research

that permits the strong inference that a wide variety of benefits of considerable magnitude probably exist" (Driver, 1990, p. 97).

Schreyer and Driver have called for more systematic research in benefits, with priority directed at empirical research (1989). The present research aims to focus explicitly on the nature and magnitude of recreation benefits through empirical observation and measurement. More precisely, the research attempts to clarify and refine the benefit domains highlighted in Schreyer and Driver's paper through the administration of a benefits item scale.

Methods

Benefit Items and Scale

The recreation benefits scale used in this study was adapted from work conducted by Thomas Greene of St. Lawrence University, who developed a list of 401 potential items (Greene, pers. comm.). In his study, Greene was interested in what prompts people to engage in particular recreational opportunities. The survey he conducted took each participant approximately 30 minutes to complete: respondents were asked to imagine themselves participating in a recreational activity in a natural setting, then rate a list of 401 benefit items on a 5-point scale ranging from "not at all desirable to "extremely desirable."

Realizing that it might be difficult and too time-consuming in the present study for participants to rate all of Greene's 401 items, especially at the outset of a wilderness trip, the list was reduced by a panel of judges, all of whom were experienced in the outdoors, to 74 potential items relating to 8 domains. These eight domains, representing potential personal benefits, were adapted from Schreyer and Driver's work (see Table 2). The result was eight conceptual dimensions represented by the 74 specific benefit items (Table 3). The dimensions were *Personal Development*, *Social Bonding*, *Therapeutic/Health*, *Experiential*, *Independence/Freedom*, *Stimulation*, *Physical Fitness/Health*, and *Relations with Nature*.

Data Collection

The data were collected using a pre-trip respondent-completed questionnaire administered by the researcher at the pre-trip meetings during the summer of 1994 (Appendix I). The sample consisted of participants in five 12-day river rafting trips on the Tatshenshini River located in northwestern British Columbia, the Yukon Territories, and Alaska. Of the 102 participants on these five river trips, 92 completed the pre-trip questionnaire (90.2% of the effective sample). Among other questions, respondents were asked to evaluate the importance of each of the 74 specific anticipated benefits items on a 4-point scale (1 = "Not Important"; 2 = "Somewhat Important"; 3 = "Important"; and 4 = "Very Important").

Study Region

The Tatshenshini River begins its flow in northern British Columbia, where it moves north into the Yukon Territories and then heads southwest into Alaska and eventually the Pacific Ocean (Figure 1). This river flows through two World Heritage areas, Kluane National Park in the Yukon Territories and Glacier Bay National Park in Alaska. In December, 1994, the Tatshenshini River and the surrounding watershed region were nominated as a World Heritage site by the United Nations because of its unique beauty. The landscape of the region and particularly the river is highlighted by high glaciated mountains, valley glaciers, calving icebergs, and wildlife. It is normal to see numerous grizzly bear and moose and an occasional wolf on a journey down the river. On a typical 12-day raft-trip, participants encounter white-water rapids, quiet canyons, long hikes into the alpine, and glacier walking. They are responsible for making and breaking their camps and helping to load and unload the rafts every day. Some people may share their musical or story-telling talents around the campfire, while others might choose to remain quietly absorbed in the wilderness about them. A trained naturalist accompanies every trip, making the opportunity to learn the natural history of the area an important aspect of the experience.

Analysis Procedures

Analysis of the questionnaire data was undertaken in several steps. To begin with, a mean-score was derived for each anticipated benefit item based on the 4-point Likert-type scale used in the pre-trip questionnaire. Next, items were grouped into the 8 conceptual dimensions, for each of which a mean-score was computed using the frequencies of scores on the items comprising that dimension. These two procedures showed the relative and absolute importance of the specific benefits participants were anticipating at the outset of the river trip, and, at a more general level, the relative importance of the eight conceptual *dimensions*.

Factor analysis was then used to classify the data in an effort to gain an objective and empirical perspective on the results. This process was accomplished by factor analyzing the data using SPSS. The analysis, however, failed to converge. We then decided to force an 8-factor solution, given that the conceptual classification contained eight categories. The minimum eigenvalue for the factors derived in this solution exceeded 2.0, and the cumulative percentage of variance explained was 62.3%. The anticipated benefits items allocated to each factor were grouped to create empirically-derived dimensions of benefits, which were then labelled according to the underlying concepts expressed in the specific items comprising the respective dimensions.

Results

Relative and Absolute Importance of Specific Benefits

As far as the specific benefits that participants in the river trip were anticipating at the beginning of the trip are concerned (Table 4), items such as "Seeing new places" (mean-score = 3.76), "Being outdoors" (3.75), "Being closer to nature" (3.58), "Getting away from civilization for a while" (3.41), and "Being inspired by nature" (3.40) scored highest. The items which scored lowest were "Developing better social skills" (1.63), "Becoming more relaxed around large groups of people" (1.70), and "Feeling more comfortable in social situations" (1.76). Benefits of intermediate importance included "Releasing my stress" (2.47), "Enjoying quality time with my family" (2.45), and

"Improving my ability to face challenges" (2.44).

Upon first glance it would appear that the anticipated benefits deemed to be most important to the participants were those associated with experiencing nature, while those least important were of a social and personal orientation. This interpretation can be verified by investigating mean-scores for dimensions of benefits.

Dimensions of Benefits

Mean-scores for the eight conceptual dimensions of anticipated benefits show that the *Relations with Nature* dimension scored the highest (mean = 3.40), followed by the *Stimulation* dimension (2.90). The two lowest scoring dimensions were *Social Bonding* (2.32) and *Personal Development* (2.24). Dimensions with intermediate scores were *Experiential* (2.90), *Therapeutic/Healing* (2.86), *Physical Fitness/Health* (2.70), and *Independence/Freedom* (2.38).

The factor-based dimensions were derived from forcing an 8-factor solution on the anticipated benefits items (Table 5). Factor 1, *Social Skills*, contained items such as "Forming new lasting relationships," "Realizing the value of new relationships," "Meeting new people," "Feeling more comfortable in social situations," and "Learning how to better understand people." Factor 2, *Escaping Routine*, included such items as "Helping to release or reduce some built-up tensions," "Feeling more relaxed," "Forgetting about work for a while," "Having a change from daily routine," and "Getting away from the usual demands of everyday life." Items such as "Experiencing the unknown," "Taking risks," "Seeking out new experiences," and "Feeling exhilaration" loaded on Factor 3, *Adventure/Risk*, while Factor 4, *Personal Confidence*, included "Having a more positive opinion of myself," "Feeling more in control of my life," and "Coping with new mental challenges." The fifth factor, *Nature/Outdoors*, contained "Being closer to nature," "Gaining a greater understanding of the natural environment," "Gaining an appreciation for wildlife," and "Being outdoors." Factor 6, *Well-being*, was exemplified by "Renewing my energy" and "Gaining a sense of peacefulness."Factor 7, *Family Bonding*, contained items such as "Having a good experience with my family" and "Improving relationships with my

family," while items in Factor 8, *Physical Health and Exercise*, included "Feeling good after being physically active," "Getting exercise," and "Improving my physical health."

The empirically-derived dimension mean-scores were *Nature/Outdoors* (3.40), *Adventure/Risk* (2.71), *Physical Health and Exercise* (2.70), *Escaping Routine* (2.70), *Well-being* (2.65), *Family Bonding* (2.50), *Personal Confidence* (2.30), and *Social Skills* (2.14).

Conceptual vs. Empirical Dimensions of Benefits

To better understand the dimensional structure of recreation benefits, it is useful to compare the dimensions and the allocation of items in the two classification schema described above. This can be accomplished in two ways: first, by examining the *dispersion of items* from the conceptual to the empirical dimensions; and second, by examining *the sources* of items for the empirical dimensions with respect to the conceptual dimensions from which they were derived (Table 6).

As far as the first perspective is concerned, only one conceptual dimension remained *perfectly* stable in terms of its being replicated in the factor analysis. This was *Physical Fitness and Health*, for which all four items appeared in a single empirical factor, with no additional items joining them. The *Stimulation* and *Relations with Nature* dimensions also remained *relatively* stable, in that the majority of items allocated to them in the conceptual classification remained in the same factors; in these cases, however, additional items from other conceptual dimensions were added to the empirically-derived factors. At the opposite extreme, the conceptually-derived *Independence/Freedom* and *Experiential* dimensions essentially disappeared, their items being dispersed among new factor-based dimensions.

Perhaps the two most interesting changes, at least with respect to clarifying the range of domains that characterizes the structure of wilderness recreation benefits, occurred in the cases of the *Personal Development* and *Social Bonding* dimensions. In both instances the original items split fairly evenly into two new and distinct dimensions: *Social Interaction* and *Personal Confidence* in the case of the conceptually-based *Personal*

Development dimension, and *Social Interaction* and *Family Bonding* in the case of the *Social Bonding* dimension.

Turning now to the second perspective, the factor-based *Social Interaction* dimension consisted of four of the items allocated to the similarly-named conceptual category. However, an additional 11 items, originally placed in the *Personal Development* dimension, also constituted part of this domain. These latter items included "Feeling more comfortable in social situations," "Being more compassionate," and "Realizing the value of new relationships." Similarly, the *Nature/Outdoors* dimension closely resembled its conceptually-derived counterpart, but with the addition of items that were originally allocated to three other dimensions, such as "Seeing new places" and "Exploring things." Two new domains, *Escape* and *Adventure/Risk*, emerged from combinations of items drawn from several different conceptual dimensions. Lastly, and of most interest, two entirely new benefits domains emerged in the factor analysis as distinct sub-dimensions of two original broad conceptual dimensions: *Personal Confidence*, which consisted of 11 items from the conceptual *Personal Development* dimension, and *Family Bonding*, the four items of which were originally included in the *Social Bonding* conceptual dimension.

The forced 8-factor solution thus provided insight into the raft-trip participants' responses with remarkable clarity. Even though there was similarity and overlap among the conceptual and empirical dimensions, refinement within the factor-based dimensions became apparent. For example, the empirical dimension *Family Bonding* emerged as a distinct factor, whereas it had been subsumed within the *Social Bonding* dimension according to Schreyer and Driver's (1989) typology. In effect, the structure of benefits related to this form of wilderness recreation participation has been clarified and more clearly defined, based on the responses from the participants of the study.

Discussion

The aim of this research was to contribute to an area of study that has been dominated by theoretical conjecture rather than empirical investigation. It is assumed that people do benefit from participation in recreation activities, but to what degree? Researchers

have hypothesized the benefits that can be derived from recreation participation; however, these hypotheses lack empirical support. This lack of empirical substantiation has, in effect, acted as a catalyst for the present study.

The specific objectives of the study were to clarify and refine the structure of recreation benefits proposed by Schreyer and Driver (1989). This was accomplished by administering a modified benefit item scale representing 8 conceptual dimensions, to participants of five 12-day river rafting trips. Through factor analysis, a benefits structure did emerge which represented 8 dimensions of the recreation experience. Not surprisingly, the *Nature* dimension emerged as the dominant domain, scoring much higher conceptually and empirically. Scoring significantly less were the other seven dimensions, which differed very little in terms of relative mean-scores.

This empirical analysis partially confirmed the taxonomy of benefits illustrated by Schreyer and Driver (1989). This confirmation is evidenced by the *Physical Health* dimension and to some extent the *Nature* dimension, both of which varied little from the conceptual to the empirical dimensions. However, where some categories of benefits remained the same, new dimensions appeared as a result of the splitting and combining of benefit items in the analysis process. In this way, the dimensions *Family Bonding*, *Social Interaction*, and *Personal Confidence* emerged. This analysis supports our initial premise and rationale for the study: that although it may be reasonable to speculate as to the nature of recreation benefit domains, empirical verification is needed for clarification and refinement.

This research contributes to the foundation of knowledge supporting benefits theory. Instead of relying on theorized dimensions of benefits, empirical dimensions have been verified. Yet, a fundamental question still remains unanswered: to what extent were the benefits that people were anticipating at the outset of their wilderness experience actually realized? This question can be answered by focusing on the 74 benefits items utilized in the scale on an item-by-item basis. But, given that a structure of domains exists and has been verified, a more appropriate and parsimonious way of investigating the realization of benefits would be to utilize the 8 empirically derived dimensions.

In addition, there is more work to be done. For example, do the benefit dimensions

revealed in this study only represent those experiences relative to a certain location and time, or can they be generalized to different settings and activities? Will participants in similar activities but in different settings experience the same benefits? Will all wilderness raft-trips produce comparable benefits regardless of location? Alternatively, what benefits would accrue from different activities in similar settings? These questions offer interesting opportunities for further research. Finally, the most difficult question to ask is how long might these benefits last and what effect will they have on other aspects of one's life, such as family and work environments? Hopefully, this initial research will lead to more empirical studies that seek to answer some of these outstanding questions.

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Table 1

Recreation Experience Preference Scales Making Up the Recreation Experience Preference (shown in bold)

Enjoy Nature
- Scenery
- General Nature Experience
- Undeveloped Nature Area

Physical Fitness

Reduce Tension
- Tension Release
- Slow Down Mentally
- Escape Role Overloads
- Escape Daily Routine

Escape Noise and Crowds
- Tranquility/Solitude
- Privacy
- Escape Crowds
- Isolation

Outdoor Learning
- General Learning
- Exploration
- Learn Geography of Area
- Learn About Nature

Share Similar Values
- Be With Friends
- Be With People Having Similar Values

Independence
- Independence
- Autonomy
- Being in Control

Family Kinship

Introspection

Be with Considerate People

Achievement/ Stimulation
- Self Confidence
- Self-Image
- Social Recognition
- Skill Recognition
- Competence Testing
- Seeking Excitement
- Stimulation
- Self-Reliance

Physical Rest

Teach/Lead Others
- Teaching-Sharing
- Leading Others

Risk Taking

Risk Reduction
- Risk Moderation
- Risk Prevention

Meet New People
- Meet New People
- Observe New People

Nostalgia

Source: Driver and Brown, 1987

Table 2

Personal Recreation Benefits

Personal Development
- Self-Concept
- Self-Actualization
- Self-reliance
- Value Clarification/Introspection
- Humility
- Leadership
- Spiritual Growth
- Aesthetic Enhancement
- Learning
- Achievement/Skills Developrnent
- Challenge

Therapeutic/Healing
- Clinical Problems
- Stress/Tension Mediation
  - Quiet/Peace
  - Stress Release
  - To Recharge Batteries
- Physical Rest/Relaxation

Independence/Freedom

Nostalgia

Experiential
- Good Time
- Passing Time/Leisure
- New Experience
- Seeing Sights
- Pleasure/Enjoyment
- Spontaneity
- Fantasy

Social Bonding
- Family Kinship
- Kinship with Significant Others
- Meeting New People
- Group Solidarity
- To Tell Others
- Experience
- Nurturance
- Cultural Awareness
- Solitude
- Escape Family

Physical Fitness/ Health
- Exercise
- Getting Tan/Sun

Stimulation
- Fun
- Excitement
- Recreation
- Adventure
- Exploration
- General Stimulation

Commodity-Related

Relations with Nature
- Enjoyment of Nature
- To be Outdoors
- Fresh Air
- Good Weather
- Scenery
- Relationships with Place

Source: Schreyer and Driver (1989). Derived from Interviews with Respondents at the Delaware Water Gap National Recreation Area and Upper Delaware Scenic and Recreational Rivers.

Table 3
Conceptual Dimensions and Benefit Allocations

Dimensions
Personal Development
Expanding my interests
Helping me enjoy life more
Feeling more comfortable in social situations
Developing better social skills
Becoming more relax around large groups of people
Gaining an overall sense of well-being
Feeling more in control of my life
Becoming more safety conscious
Learning how to better understand people
Developing personal spiritual values
Gaining the knowledge of my personal capabilities
Collecting my thoughts
Broadening my outlook on life
Being able to change to meet new situations
Increasing my ability to deal with diverse groups of people
Being more compassionate
Improving my ability to trust others
Realizing the value of new relationships
Increasing my self-confidence
Gaining the knowledge of how to be comfortable in nature
Improving social skills
Improving my ability to face challenges
Having a more positive opinion of myself
Feeling better about myself
Growing as a person
Giving myself inner strength
Coping with new mental challenges
Independence/Freedom
Gaining a sense of freedom

Table 3 (cont.)
Conceptual Dimensions and Benefit Allocations

Dimensions
Feeling less constrained in my thought and actions
Freeing myself to think creatively
Being free to make my own choices
Experiential
Doing something I've never done before
Taking risks
Seeing new places
Experiencing uncertainty of not knowing what will happen
Having a change from my daily routine
Stimulations
Facing dangerous situations
Heightening my sense of adventure
Seeking out new experiences
Feeling exhilaration
Experiencing the unknown
Explore things
Social Bonding
Participating as a team member
Enjoying quality time with my family
Enjoying the company of people who came with me
Building new friendships
Improving relationships with my family
Being with others who enjoy the same things I do
Forming new lasting relationships
Meeting new people
Having a good experience with my family

Table 3 (cont.)
Conceptual Dimensions and Benefit Allocations

Dimensions
Therapeutic Health
Feeling more relaxed
Experiencing a change of pace
Worrying less
Gaining a sense of peacefulness
Being away from crowds of people
Releasing my stress
Forgetting about work for awhile
Renewing my energy
Relaxing physically
Helping to release or reduce some built up tensions
Having my mind move at a slower pace
Getting away from the usual demands of everyday life
Experiencing surroundings that are soothing
Getting away from civilization for awhile
Physical Health
Improving my physical coordination
Improving my physical health
Feeling good after being physically active
Getting exercise
Relationships with Nature
Being outdoors
Gaining respect for the environment
Gaining an appreciation for wildlife
Gaining a greater understanding of the natural environment
Being inspired by nature
Being closer to nature

Table 4

Relative and Absolute Importance of Anticipated Benefits

Items	Mean*
Seeing new places	3.76
Being outdoors	3.75
Being closer to nature	3.58
Getting away from civilization for awhile	3.41
Being inspired by nature	3.40
Getting away from the demands of everyday life	3.35
Seeking out new experiences	3.33
Getting a better understanding of the natural environment	3.27
Being away from crowds of people	3.27
Exploring things	3.25
Feeling exhilaration	3.16
Gaining an appreciation for wildlife	3.11
Gaining a sense of peacefulness	3.09
Having a change from my daily routine	3.08
Gaining respect fro the environment	3.04
Helping me enjoy life more	3.03
Gaining an overall sense of well-being	3.02
Experiencing surroundings that are soothing	3.01
Doing something I've never done before	3.01
Experiencing a change of pace	2.98
Heightening my sense of adventure	2.96
Feeling good after being physically active	2.95
Experiencing the unknown	2.92
Getting exercise	2.89
Forgetting about work for awhile	2.86
Renewing my energy	2.85
Feeling more relaxed	2.83
Gaining a sense of freedom	2.83
Broadening my outlook on life	2.82
Enjoying the company of the people who came with me	2.82
Being with others who enjoy the same things I do	2.78
Expanding my interests	2.76
Improving my physical health	2.73
Gaining the knowledge of how to be comfortable in nature	2.69
Relaxing physically	2.67
Having a good experience with my family	2.55
Collecting my thoughts	2.51
Growing as a person	2.47
Being able to change to meet new situations	2.47
Releasing my stress	2.47
Having my mind move at a slower pace	2.46

Table 4 (cont.)

Relative and Absolute Importance of Anticipated Benefits

Items	Mean*
Freeing myself to think creatively	2.46
Enjoying quality time with my family	2.45
Improving my ability to face challenges	2.44
Gaining the knowledge of my personal capabilities	2.44
Helping to release or reduce some built up tension	2.43
Taking risks	2.35
Giving myself inner strength	2.33
Coping with new mental challenges	2.27
Building new friendships	2.24
Developing personal spiritual values	2.23
Improving my physical coordination	2.22
Meeting new people	2.21
Worrying less	2.20
Feeling better about myself	2.20
Participating as a team member	2.19
Experiencing uncertainty	2.15
Feeling less constrained in my thought and actions	2.13
Being free to make my own choices	2.10
Increasing my self-confidence	2.07
Being more compassionate	2.06
Improving relationships with my family	2.04
Increasing my ability to deal with diverse groups of people	1.98
Realizing the value of new relationships	1.97
Learning how to better understand people	1.92
Having a more positive feeling of myself	1.91
Becoming more safety conscious	1.89
Improving my ability to trust others	1.87
Feeling more in control of my life	1.86
Forming new lasting relationships	1.84
Facing dangerous situations	1.79
Feeling more comfortable in social situations	1.76
Becoming more relaxed around large groups of people	1.70
Developing better social skills	1.63

***Based on scale of 1=Not Important, 2=Somewhat Important, 3=Important, 4=Very Important**

Table 5
Factor Loadings of Anticipated Benefits

	Factors							
Factor/Items	1	2	3	4	5	6	7	8
Factor 1								
Social Interaction								
New relationships	**0.79**	0.03	0.02	0.20	0.05	0.11	0.06	0.15
Value of relationships	**0.78**	0.27	0.03	0.14	0.11	0.04	0.12	0.10
Meeting new people	**0.77**	0.04	-0.05	0.07	-0 12	-0.08	0.12	0.13
Relaxed around people	**0.75**	0.17	0.26	0.08	0.04	0.05	0.01	-0.07
Comfortable in social	**0.71**	0.17	0.27	0.31	-0.02	0.00	-0.06	0.00
Divers groups of people	**0.64**	0.10	0.37	0.37	-0.10	0.57	0.03	-0.10
Building new friendships	**0.64**	0.00	0.03	0.10	0.11	-0.12	-0.07	0.35
More safety conscious	**0.63**	0.13	0.32	0.12	0.16	-0.06	0.16	0.03
Ability to trust others	**0.60**	0.13	0.32	0.45	0.04	0.03	-0.02	0.20
More compassionate	**0.59**	0.16	0.32	0.16	-0.05	0.20	0.10	-0.05
Understand people	**0.55**	0.02	0.50	0.34	-0.02	0.17	-0.10	-0.07
Growing as a person	**0.55**	0.20	0.20	0.33	-0.04	0.23	-0.10	-0.20
Expanding my interests	**0.51**	0.07	0.01	0.17	0.37	0.31	0.31	-0.07
Broadening outlook on life	**0.50**	0.04	-0.40	0.20	0.14	0.46	0.20	-0.20
Others who enjoy same	**0.48**	0.02	0.07	0.08	0.23	0.26	-0.14	0.41
Factor 2								
Escaping Routine								
Release tensions	0.07	**0.81**	-0.02	0.00	-0.06	0.07	-0.06	0.23
Releasing my stress	-0.07	**0.77**	-0.20	0.23	-0.10	-0.10	0.10	0.06
Feeling more relaxed	0.10	**0.75**	0.15	0.00	0.07	0.32	0.10	-0.08
Forget work	0.15	**0.71**	0.12	0.06	0.10	-0.25	0.12	-0.10
Relaxing physically	0.13	**0.68**	-0.20	-0.02	0.10	0.07	0.14	0.18
Move at a slower pace	0.32	**0.64**	0.14	-0.11	0.11	0.23	-0.07	0.02

Table 5 (cont.)...

Change of pace	0.07	**0.60**	0.53	0.01	0.02	-0.07	0.08	0.00
Worrying less	0.31	**0.59**	0.27	0.03	0.64	0.18	0.06	0.02
Collecting my thoughts	-0.07	**0.58**	0.07	0.37	-0.02	0.31	0.00	-0.20
Change my daily routine	0.03	**0.57**	0.54	-0.01	0.11	0.14	0.10	0.00
Getting away	0.08	**0.52**	0.00	0.10	0.46	-0.18	-0.03	0.14
Feeling less constrained	0.20	**0.47**	0.12	0.42	-0.10	0.10	-0.16	0.20
Helping enjoy life	0.16	**0.45**	0.23	0.15	0.28	0.11	0.13	0.09
Feel better about self	0.34	**0.44**	0.21	0.42	-0.11	0.14	0.03	0.20
Factor 3								
Adventure/ Risk								
Experiencing unknown	0.16	-0.27	**0.77**	0.00	0.10	0.02	0.14	-0.03
Taking risks	0.22	0.06	**0.72**	0.16	-0.17	0.00	0.20	0.20
Gain sense of freedom	-0.04	0.24	**0.67**	0.15	0.06	0.40	0.02	0.11
Heighten adventure	0.16	0.27	**0.64**	0.37	0.15	-0.08	0.16	0.03
New experiences	0.05	0.09	**0.63**	0.24	0.02	-0.02	0.27	0.02
Doing something new	0.28	0.20	**0.59**	0.16	0.00	-0.20	0.03	-0.05
Dangerous situations	0.21	-0.20	**0.58**	0.02	-0.10	0.11	0.24	0.10
Uncertainty	0.31	0.04	**0.58**	0.11	-0.04	0.10	-0.14	0.12
Feel exhilaration	-0.07	-0.10	**0.48**	0.14	0.11	0.02	0.00	0.31
Factor 4								
Personal Confidence								
Positive opinion	0.30	0.20	0.12	**0.76**	-0.02	0.10	0.11	0.05
Feeling more in control	0.07	0.21	0.20	**0.75**	-0.10	0.07	-0.04	0.00
Increase self-confidence	0.30	0.26	0.07	**0.71**	0.11	-0.10	0.20	0.50
Knowledge of capabilities	0.31	-0.04	0.40	**0.63**	0.20	-0.02	-0.03	0.14
New mental challenges	0.16	0.00	0.11	**0.63**	-0.10	0.20	0.05	0.10
Face challenges	0.30	-0.05	0.38	**0.62**	0.21	-0.03	-0.11	0.20
Develop spiritual values	-0.10	-0.12	-0.13	**0.60**	0.10	0.33	-0.10	-0.20
Better social skills	0.33	0.10	0.04	**0.59**	-0.02	-0.33	0.04	-0.02
Act as team member	0.35	-0.20	0.40	**0.54**	-0.04	-0.15	-0.05	0.22
Meet new situations	0.40	0.00	0.35	**0.52**	0.11	0.10	-0.10	0.30
Comfortable in nature	0.34	0.04	0.03	**0.50**	0.40	0.00	0.01	0.10
Sense of well-being	-0.20	-0.02	-0.20	**0.44**	0.21	0.42	0.10	0.11

Table 5 (cont.)

Factor 5								
Nature/ Outdoors								
Being close to nature	-0.04	0.00	-0.05	0.12	**0.76**	0.10	-0.01	0.13
Understand environment	0.15	-0.20	-0.20	0.16	**0.73**	0.25	0.02	-0.10
Away from crowds	-0.12	0.13	-0.06	-0.13	**0.68**	-0.01	0.01	0.05
Appreciation for wildlife	0.33	-0.04	-0.10	0.31	**0.65**	0.10	0.23	-0.04
Getting away	-0.14	0.20	0.43	-0.10	**0.62**	-0.02	-0.04	0.10
Exploring things	0.20	-0.02	0.34	-0.07	**0.55**	0.01	0.30	0.13
Respect environment	0.36	0.10	0.03	0.20	**0.54**	0.30	0.20	-0.14
Being inspired by nature	-0.02	0.00	-0.13	-0.03	**0.52**	0.34	-0.10	-0.20
Seeing new places	0.12	0.13	0.33	-0.10	**0.50**	-0.07	-0.03	0.05
Being outdoors	-0.21	0.20	0.33	-0.10	**0.43**	0.31	-0.15	0.10
Factor 6								
Well-Being								
Renewing my energy	0.10	0.51	0.03	-0.03	0.10	**0.59**	0.16	0.26
Soothing surroundings	0.16	0.43	-0.02	-0.23	0.30	**0.53**	0.00	0.06
Make my own choices	0.30	0.05	0.10	0.20	0.06	**0.51**	0.50	0.40
Sense of peacefulness	-0.30	0.35	0.06	0.14	0.35	**0.50**	0.00	-0.02
Think creatively	0.06	0.12	0.32	0.38	0.10	**0.47**	0.04	0.03
Giving inner strength	0.33	0.04	0.32	0.43	0.02	**0.47**	-0.10	0.10
Factor 7								
Family Bonding								
Experience w/family	-0.07	-0.02	0.10	0.50	0.02	-0.06	**0.92**	0.00
Quality w/family	-0.05	0.10	0.20	-0.10	0.07	0.05	**0.89**	-0.01
Relationships with family	0.06	0.16	0.18	0.10	-0.11	0.18	**0.80**	0.06
Enjoying the company	0.34	.011	0.04	-0.05	0.23	-0.05	**0.46**	0.04
Factor 8								
Physical Health and Exercise								
Good/physically active	0.05	0.20	0.32	0.14	0.00	0.16	0.16	**0.74**
Getting exercise	-0.13	0.40	-0.03	0.13	0.12	-0.16	0.10	**0.66**
Improve coordination	0.32	-0.01	0.25	0.26	0.01	0.08	-0.04	**0.54**
Improve health	0.32	0.41	0.30	0.10	-0.10	0.20	0.11	**0.50**

Table 5 (cont.)

Eigenvalue	18.80	6.30	5.00	4.30	3.50	3.10	2.60	2.50
% of Variance exp.	25.40	8.50	6.80	5.80	4.80	4.20	3.60	3.40
Cumulative % Of variance exp.	25.40	33.80	40.60	46.40	51.20	55.40	58.90	62.30
Communality	0.73	0.73	0.63	0.50	0.73	0.65	0.87	0.58
Scale mean score	2.14	2.70	2.71	2.30	3.40	2.65	2.50	2.70

Table 6
Conceptual vs. Empirical (Factor based) Classification of 74 Anticipated Benefit Items

	Conceptual								
Empirical	Personal	Indep/ Freedom	Experiential	Stimulation	Social	Therapeutic	Physical Health	Nature	**Totals**
Social Interaction	11				4				**15**
Escape	3	1	1			9			**14**
Adventure Risk		1	3	5					**9**
Personal	11				1				**12**
Nature/ Outdoors			1	1		2		6	**10**
Therapeutic	1	2				3			**6**
Family					4				**4**
Physical Health							4		**4**
Totals	**26**	**4**	**5**	**6**	**9**	**14**	**4**	**6**	**74**

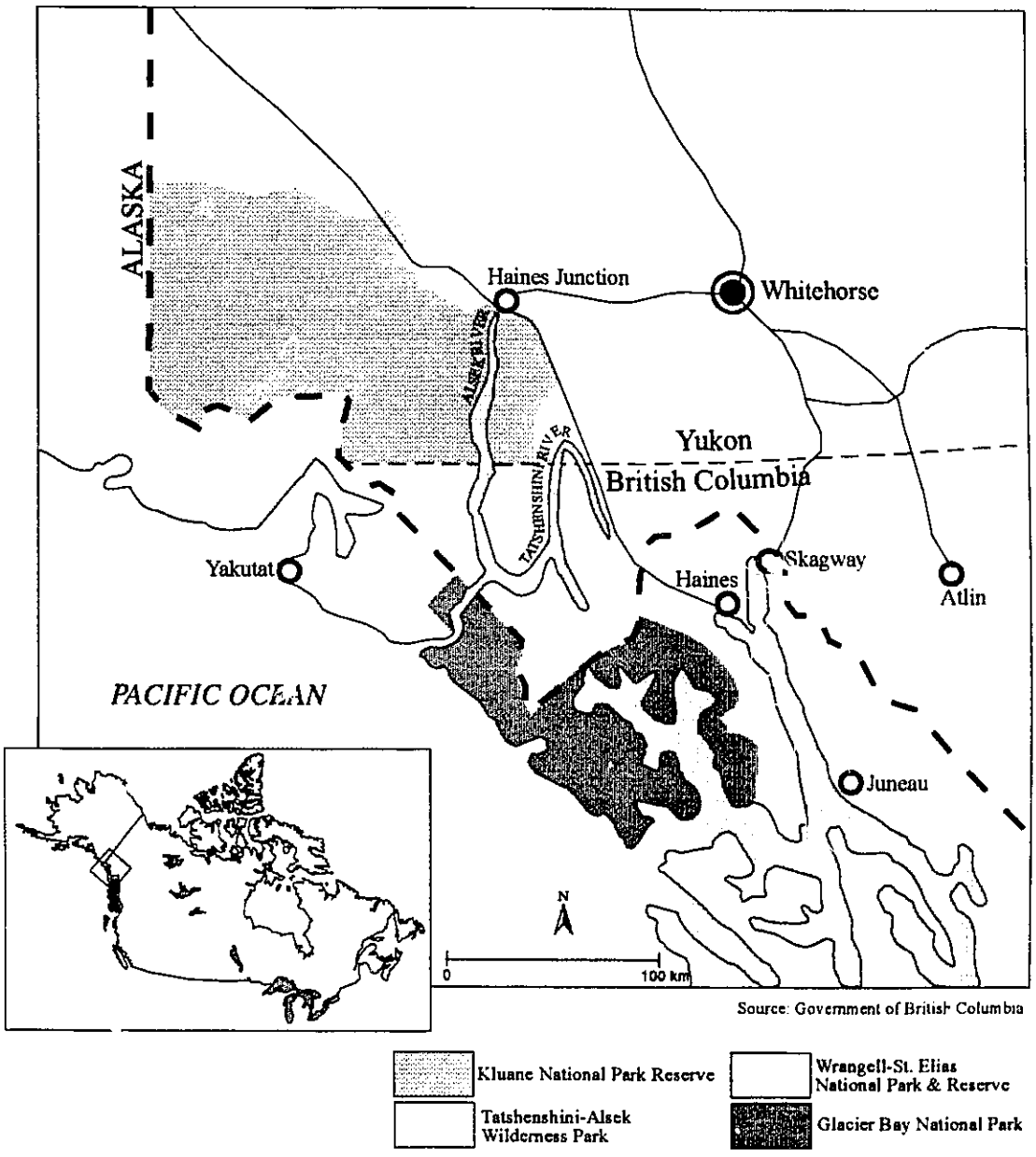

Figure 1. Study Area

Recreation Benefits: Realization of Anticipated Benefits

Introduction

It is reasonable to assume that people participating in recreational activities have certain expectations from their participation, such as improved health, a better tan, or a chance to get to know someone better. Participants in a long-term wilderness trip, for example, may hope to relieve stress, experience nature first-hand, and/or reaffirm family bonds. If these expectations are met, then one could say they benefited from their participation in that activity. But, despite the seemingly obvious nature of recreation benefits, very little is known about them from an empirical point of view.

The study of recreation benefits has, for the most part, lacked empirical validity and has, instead, focused on conceptualization of recreation benefits in which to build constructs (Schreyer & Driver, 1989). What little is known has been inferred from other studies such as motivations (Iso-Ahola, 1989) and leisure satisfaction research (Mannell, 1989). Although this research has been useful, its focus has been mainly on the initial reasons why people may participate in a particular activity rather than the benefits that can be attained from participation.

Recent research (Colton & Jackson, 1995) has demonstrated an initial start towards understanding recreation benefits through empirical measurement. Colton and Jackson's (1995) study examined the benefits anticipated by participants in a wilderness raft-trip and empirically verified eight anticipated benefit domains based on experience preference scale items. However, their research left an unanswered question: to what extent were the anticipated benefits actually realized by the participants of the raft-trips? The present study focuses on examining the realization of those anticipated benefits by making use of the already empirically verified anticipated benefit items and their domains. Also, at a more general level, this research seeks to determine if the participants of the river-trips benefited from their participation. Finally, this research seeks to build upon the objectives illustrated by Schreyer and Driver (1989), in which they called for more systematic empirical measurement of recreation benefits to enable a more consistent and cohesive benefits theory.

Background to the Study

Experience Preferences

The measurement of recreation benefits are directly related to the conceptualization and utilization of experience preference scales and their application in recreation resource management (Colton & Jackson, 1995). Beginning in the early 1970s (Knopf, 1972), experience preference scales have been used to measure and quantify the needs and desires of recreationists who participate in various activities. These psychological measures evolved into what today are commonly called Recreation Experience Preference (REP) scales (Driver, 1977).

REP scales have frequently been used by recreation and leisure researchers (e.g., Driver & Cooksey, 1977; Brown & Haas, 1980; Yuan & McEwen, 1989; Virden & Knopf, 1989). These scales have tended to be utilized in measuring the needs and desires of participants in various activities and environments prior to engagement, where respondents would anticipate the experience and report on it. These types of studies (Driver, Brown, Stankey, & Gregoire, 1987; and Yuan & McEwen, 1989) were extremely useful in providing insight into recreation resource management issues and led in part to further refinement of the Recreation Opportunity Spectrum (ROS), a method with which to manage recreation resources.

Notwithstanding the apparent usefulness of experience preference scales in refining management methods such as the ROS, only a few studies have examined the effects of the recreation experience on the participants over time (Iso-Ahola & Allen, 1982; Manfredo, 1984; Williams, Ellis, Nickerson, & Shafer, 1988; Stewart, 1992). Iso-Ahola and Allen (1982) examined the stability of experience preferences over time using pre-test/post-test responses of intramural basketball players. Among the first to address this issue, they found that experience preferences were affected by the actual recreation experience and also the specific outcome of the experience. For example, basketball players who won their games had different responses to the post-test than those basketball players who lost their games. Iso-Ahola and Allen (1982) concluded that experience preferences are relative

constructs, unstable over time, and largely associated with the outcome of the experience.

Although Manfredo's (1984) study found the effect of time of survey administration meaningless, his onsite-offsite post-test-only survey of steelhead anglers found significant differences within subjects over time, suggesting that anglers respond inconsistently. Similarly, Williams et al.'s (1988) pre-test/post-test study of participants of an outdoor leadership school found a small subject by time interaction. Their results indicated that little variance was found between time and format; however, there was considerable variance by experience preference domain, subject, and subject by domain. Other research has examined the impact of the actual experience on experience preferences and has attempted to explain the shift between pre-test and post-test results in terms of dissonance theory (Stewart, 1992). Dissonance theory, put simply and applied to experience preferences, attempts to deal with the inconsistencies participants deal with when rating the actual experience with the experience preference judgment made at the beginning of the activity. "In short, the application of dissonance theory can be used to explain the relationship between what people wanted and what they got" (Stewart, 1992, p. 188).

Collectively, the studies summarized above demonstrate that the differences between pre-test and post-test experience preferences can be accounted for by the effect of the actual experience on the participant. Although these studies are different in many respects from the present research, their conclusions are relevant: they show that experience preferences are dynamic and subject to change for a number of reasons and can be viewed from numerous perspectives. The present study, which utilizes a modified Recreation Experience Preference scale (REP), seeks to determine if the actual experience of river rafting for 12-days affects the anticipated experience preferences. In other words, are the anticipated benefits of the trip actually realized?

Benefits of Recreation

The theory of recreation benefits is relatively new and has evolved in part from the development and use of experience preference scales, and from the sorts of recreation

resource management issues mentioned earlier. A recreation benefit can broadly be defined as "a desirable change of state; it is a specified improvement in condition or state of an individual or group of individuals, of a society, or even of non-human organisms" (Driver, Nash, & Haas, 1987, p. 295). Although much has been written regarding recreation benefits (Schreyer & Driver, 1989; Driver, Brown, & Peterson, 1991) very little published work has actually been based on empirical measurement and observation.

For example, although Schreyer and Driver's (1989) synthesis of the current knowledge on benefits was greatly needed, many of the taxonomies of benefits listed in their paper were speculated at meetings and symposiums. Therefore, Schreyer and Driver's (1989) objectives were to summarize what was already known about the benefits of leisure, to point out the lack of empirically supported knowledge about benefits, and to encourage future research on benefits to fill the empirical void. This was accomplished partially by referring to tables of benefits that ranged from the personal benefits that can accrue to participants in recreation activities (Table 1) to other taxonomies that were more broad, including such items as commodity-related benefits and specific wilderness benefits.

Researchers (Colton & Jackson, 1995; Melamid, Meir, & Samson, 1995; Schreyer & Driver, 1989) have argued that to fully understand the benefits of recreation, future research should focus on empirical measurement and more specifically, focus on the gain or benefits that accrue from participation. This research approach has been outlined more explicitly by Schreyer and Driver (1989) who, in a sense, mapped out the direction for research attempting to understand these questions. First, the specific benefits must be determined, followed by the variables needed to quantify the impact of the benefits. Finally, the impact would be measured. In some respects, parts of this process have been accomplished through the various lists of potential recreation benefits developed by leisure researchers. However, observation and measurement in which to document recreation benefits empirically has just begun.

Utilizing a modified experience preference scale consisting of 74 specific benefit items, Colton and Jackson (1995) empirically verified to a certain degree, Schreyer and Driver's (1989) table of personal benefits of outdoor recreation using as a sample, 92 participants of 12-day river-rafting trips. Their pre-trip survey asked respondents to rate the

importance of 74 benefit items before commencement of the raft trip. These responses were later factor analyzed and resulted in 8 dimensions. The dimensions were *Nature/Outdoors, Escaping Routine, Adventure/Risk, Well-Being, Family Bonding, Social Skills, Personal Confidence,* and *Physical Health and Exercise.* The present study utilizes the findings of Colton and Jackson (1995) and seeks to determine the magnitude of the benefit realizations through analysis of a post-trip questionnaire.

Methods

Benefit Items and Scale

The recreation benefits scale used in this study was adapted from work conducted by Thomas Greene of St. Lawrence University, who developed a list of 401 potential items (Greene, pers. comm.). In his study, Greene was interested in what prompts people to engage in particular recreational opportunities. The survey he conducted took each participant approximately 30 minutes to complete: respondents were asked to imagine themselves participating in a recreational activity in a natural setting, then rate a list of 401 benefit items on a 5-point scale ranging from "not at all desirable to "extremely desirable."

Realizing that it might be difficult and too time-consuming in the present study for participants to rate all of Greene's 401 items, the list was reduced by a panel of judges, all of whom were experienced in the outdoors, to 74 potential items relating to 8 domains. These eight domains, representing potential personal benefits, were adapted from Schreyer and Driver's work (see Table 1). The result was eight conceptual dimensions represented by the 74 specific benefit items. The dimensions were *Personal Development, Social Bonding, Therapeutic/Health, Experiential, Independence/Freedom, Stimulation, Physical Fitness/Health,* and *Relations with Nature.*

Data Collection

The sample consisted of participants in five 12-day river rafting trips on the Tatshenshini River located in northwestern British Columbia, the Yukon Territories, and Alaska. From the sample, data were collected in two stages. First, a pre-trip respondent-

completed questionnaire (Appendix I) was administered which asked the respondents to rate the importance of 74 specific *anticipated* benefit items (Colton & Jackson, 1995). The post-trip questionnaire (Appendix II) asked the respondents to reevaluate the anticipated benefit items by rating them as 74 *realized* benefit items on a 4-point scale (1 = "Was Not Expecting"; 2 = "Below Expectations"; 3 = "Above Expectations"; and 4 = "Well Beyond Expectations"). In addition, a single "global" question asked participants to rate the overall trip ("Exceeded Expectations", "Less than Expectations", and "About what I expected"). Finally, respondents were given a chance to evaluate the trip through open-ended questions which asked what they liked most and least about the raft-trip.

Of the 102 participants on these five river trips, 92 completed the pre-trip and post-trip questionnaire (90.2% of the effective sample). The analysis, results and discussion in the present study are an extension of the empirical findings of Colton and Jackson (1995), which dealt specifically with the anticipated benefit items and their dimensions, and the findings that emerged from the post-trip questionnaire.

Study Region

The Tatshenshini River begins its flow in northern British Columbia, where it moves north into the Yukon Territories and then heads southwest into Alaska and eventually the Pacific Ocean (Figure 1). This river flows through two World Heritage areas, Kluane National Park in the Yukon Territories and Glacier Bay National Park in Alaska. In December, 1994, the Tatshenshini River and the surrounding watershed region were nominated as a World Heritage site by the United Nations because of their unique beauty. The landscape of the region and particularly the river is highlighted by high glaciated mountains, valley glaciers, calving icebergs, and wildlife. It is normal to see numerous grizzly bear and moose and an occasional wolf on a journey down the river. On a typical 12-day raft-trip, participants encounter white-water rapids, quiet canyons, long hikes into the alpine, and glacier walking. They are responsible for making and breaking their camps and helping to load and unload the rafts every day. Some people may share their musical or story-telling talents around the campfire, while others might choose to

remain quietly absorbed in the wilderness about them. A trained naturalist accompanies every trip, making the opportunity to learn the natural history of the area an important aspect of the experience.

Analysis Procedures

Analysis of the data involved four steps. To start with, the realized benefits items were re-coded by combining the four response-categories into three new categories (-1 = "Below Expectations"; 1 = "Above Expectations"; and 2 = "Well Above Expectations"; This process deleted the "Was Not Expecting" response, but despite the omitted category, an overall mean score of 0 would give a surrogate measure of "equal to expectations"). A mean score was then derived for each realized benefit item based on the recoded categories. These items were then grouped into the 8 empirical dimensions verified by Colton and Jackson (1995). Dimension mean-scores were then calculated taking into account variations in the number of items checked per dimension per respondent. These procedures illustrated the realized expectations of the specific benefits that participants anticipated at the beginning of their trip, and at a more general level, the realized expectations of the 8 dimensions of realized benefits.

Next, it was important to determine if the participants in the river trips actually realized the benefits they were anticipating at the outset of their trip. This was examined by creating a matrix based on the mean and standard deviations of both the anticipated and realized benefit items and their dimensions. From this process, four levels of benefits realization developed ("Met Expectations"; "Just Above Expectations"; "Above Expectations"; and "Well-Above Expectations"); and when compared with the four levels of importance for the anticipated benefits, 16 cells emerged. Finally, to give an idea of overall trip satisfaction, the responses to the overall trip expectations question are examined along with the subjective open-ended responses found in the post-trip questionnaire.

Results

Relative Expectations of Benefits

As far as specific benefits that participants in the river trip were expecting to achieve by the end of the trip are concerned (Table 2), items such as "Seeing new places" (mean-score = 1.55), "Getting away from civilization for awhile" (1.43), "Having a change from my daily routine" (1.39), and "Forgetting about work for awhile" (1.39) scored highest. Those items scoring lowest were "Being free to make my own choices" (.24), "Taking risks" (.36), "Facing dangerous situations" (.39), and "Improving my physical coordination" (.44). Realized benefit items of intermediate importance were "Feeling less constrained in my thought and actions" (.88), "Increasing my ability to trust others" (.88), "Feeling better about myself" (.87), and "Building new friendships" (.84). It is important to point out that even the lowest-scoring item had a positive score, indicating relative levels of realization rather than a difference between expectations that were realized and those that were not.

Unlike the pre-test results, in which it was found that items associated with nature scored highest, while those of a social and personal orientation scored lowest, the post-test data show that realized benefit items related to escape scored highest, followed by those items relating to nature. Therefore, benefit items of lesser realization were associated with physical health, independence, and risk. Examination of the realized benefit dimensions provides deeper insight into these differences.

Dimensions of Realized Benefits

As stated earlier, the realized benefit items were allocated to the empirically verified anticipated benefit dimensions (Colton & Jackson, 1995). Although specific items relating to escape scored among the highest, the mean-scores for the 8 realized benefit dimensions show that the *Nature/Outdoors* domain scored the highest on average (mean = 1.19), followed by the *Family Bonding* dimension (1.08). The two lowest scoring dimensions were *Physical Health and Exercise* (.52), and *Social Skills* (.79). Dimensions with intermediate scores were *Escaping Routine* (1.07), *Adventure/Risk* (.99), *Personal*

Confidence (.82), and *Well-Being* (.80).

Anticipated and Realized Benefit Items

Figure 2 illustrates the level of importance of those benefit items as they were anticipated at the outset of the wilderness raft-trip and to what extent they were actually realized. The items shown are examples of the 74 benefit items. Cells with only one or two items represent the total number of benefit items designated to that cell. For instance, while the benefit items "Facing dangerous situations", "Becoming more safety conscious", and "Learning how to better understand people" were *Not Important* at the beginning of the trip, by the end, these benefit items were found to be *Just Above Expectations*. "Realizing the value of new relationships" was *Not Important* as well, but was found to be *Above Expectations* by the end of the trip.

Somewhat Important anticipated benefit items that *Met Expectations* were "Taking risks" and "Being free to make my own choices", while those *Just Above Expectations* were "Growing as a person" and "Increasing my self confidence." Benefit items found to be *Above Expectations* were "Having a good experience with my family" and "Enjoying quality time with my family."

Some *Important* anticipated benefit items like "Gaining a sense of freedom", and "Improving my physical health" were *Just Above Expectations*. "Having a change from my daily routine", "Experiencing a change of pace", and "Experiencing the unknown" were also *Important* pre-trip anticipations, but were *Above Expectations* regarding realization. Anticipated benefit items that were *Very Important* tended to be *Above Expectations* and *Well-Above Expectations.* In fact there were no benefit items found in the *Met Expectations* or the *Just Above Expectations* cells. For example, "Being outdoors", "Getting away from civilization for awhile", and "Getting away from the demands of everyday life" were *Above Expectations* while "Seeing new places" was *Well-Above Expectations*.

It is not surprising that items associated with socialization were *Not Important* at the outset of the trip. Given the nature of the raft-trip and its location, most people would most

likely be anticipating the outdoor aspects. However, after floating down the river for 12 days with 20 other people as companions, evening campfires with sing-songs, and long hikes, it should come as no surprise that benefit items associated with social aspects of the trip would rate higher by the end of the expedition. Those anticipated items that were *Somewhat Important* appear to be broken down into 3 groups: family, personal, and freedom. Those family oriented items were found to be *Above Expectations* although only *Somewhat Important* at the beginning of the trip. This discrepancy of benefit items concerning family relationships can show the value of long-term wilderness trips and the potential importance for family bonding. Items of a personal nature were found to be *Just Above Expectations* while those concerning risk and freedom only *Met Expectations*. Given the fact that the 12 day river trip is professionally guided and follows strict guidelines concerning safety, there may be a perceived lack of freedom amongst certain individuals who may wish to explore more but can only do so in group situations.

The anticipated benefit items that were *Important* and *Very Important* were all found to be *Above Expectations* and *Well-Above Expectations*. These items and their expectations reflect the isolation and the rugged beauty of the World Heritage Parks through which the trips pass. However, by examining these and other items on a dimensions basis, a more general and global view of benefit allocations will emerge.

Anticipated Benefit and Realized Benefit Dimensions

Like Figure 2, which demonstrated the benefit item allocation, Figure 3 did very much the same, but on a more general level utilizing the 8 empirical dimensions. For example, there were no anticipated benefit dimensions found in the *Not Important* category (Figure 3), but there were three found to be *Somewhat Important:* Social Skills and Personal Confidence were *Just Above Expectations* and Family Bonding was *Above Expectations*. Anticipated benefit dimensions that were *Important* such as Well-Being and Physical Health and Exercise were *Just Above Expectations*, while Adventure/Risk and Escaping Routine were found to be *Above Expectations*. Nature/Outdoors was the only dimension rated as *Very Important* and *Well-Above Expectations* in benefits realization.

By examining the benefits on an item by item basis as well as by dimensions, it becomes possible to see what were the beneficial gains during the participants two-week river trip. Benefits associated with nature that were anticipated highly and realized highly were fairly stable, yet dimensions of a physical and therapeutic nature did not quite match pre-trip anticipations. As one respondent noted, "I expected to be challenged physically." Unfortunately, with over 20 people on these trips it becomes difficult to please all levels of physical exertion. But despite the disappointment some people may have had regarding some pre-trip anticipations there were some surprises, especially for families. This is highlighted by one response in particular in which the participant remarked, "the totality of this experience for my family-diversity of people, landscape, weather, experiences and thoughts created the most all-consuming experience we have ever enjoyed together as a family of four."

Overall Trip Expectations and Personal Comments

To gain a more global measure of the realizations of trip expectations its useful to examine the overall trip expectations variable and more responses to the open-ended questions. The majority of the trip participants (54.3%) found that the river-trip exceeded their expectations. One respondent noted the wilderness was "unbelievably beautiful." Another noted, "the degree of relaxation and exhilaration experienced throughout the trip was unexpected." Still another mentioned that the experience was a "trip of a life-time." These responses and many more reflect the quality of the experience of the participants and how that experience may affect their lives at some other point. As one enthusiastic participant noted, "The wilderness experience was outstanding, a chance to experience the vastness of the mountains, waters, flowers, and animals in such solitude. For each a spiritual renewal and growth that will change you when you return home."

Almost 31% of the respondents reported that the trip was equal to expectations, which was reflected in a few of the answers to the open-ended questions. For instance, one respondent noted, "By and large I got what I hoped I would, but all the same, my hopes were pretty high." There were others who wished they had brought family members. For

instance, one person remarked, "The only way the trip could have been better for me would be to share it with my wife and sons. I would like to do a similar trip with my family."

The majority of the responses were positive for those who exceeded or met their expectations; however, those persons that found the trip to be less than their expectations (14.8%) had a number of negative responses. For example, one noted, "I felt the trip dragged on too long, lack of freedom for me-the hardest part was forced relaxation." Another person remarked, "I was hoping to be more independent, would like to have got more exercise whether rowing or hiking." One participant noted, "Not quite enough personal challenge and involvement. Too much being done for instead of done with." Finally, one respondent remarked, "I didn't have very significant expectations for this trip."

With the inclusion of the overall trip expectations variable and the responses from some of the participants of the study, the quantitative measures of measuring benefits are enhanced. This leads to greater information and in turn greater understanding of the dynamics of pre-trip anticipations and post-trip realizations.

Discussion

There were three objectives in this research. Verifying and building on previous research by Colton and Jackson (1995) concerning the realization of anticipated benefits was first. Secondly, it was important to contribute to the empirical foundation of benefits theory called for by Schreyer and Driver (1989). Finally, the study sought to determine if the participants of the river trips benefited from their experience.

Ultimately, the preceding analysis begs the question: did the participants of this study benefit from the river trips and if so, then in what ways? This can be examined by referring to examples from Figures 2 and 3. Since the realized benefit categories (Figure 2) go from *Met Expectations* to *Well-Above Expectations*, anything over *Met Expectations* would indicate a beneficial gain; however, there are varying degrees as to what extent some benefit items were realized. For instance, those anticipated benefit items that were *Not Important* but above *Met Expectations* could be considered unexpected benefits. This is

especially true with the item "Realizing the value of new relationships." Other unexpected outcomes include benefits to families such as "Having a good experience with my family" and "Enjoying quality time with my family". This was verified in Figure 3 in which Family Bonding was only *Somewhat Important* but *Above Expectations* in terms of realization by the end of the trip.

Since a 12-day wilderness river trip implies getting away from it all within a natural environment, benefit items such as "Being outdoors", "Having a change from my daily routine", and "Getting away from civilization for awhile" were most likely expected well before the trip started. However, instead of having *Met Expectations*, these items were *Above Expectations*, which indicates that items relating to escape and nature were beneficial gains as well.

In addition, one must question how the predictions of pre-trip anticipations by participants of the raft trips reflect what they actually achieved by the end of the trip. In some respects, one could say the participants' predictions were accurate concerning nature and escapism. These predictions were helped in many respects by the marketing of the raft trips which portray a wilderness experience and the chance to get away from it all. On the other hand, family, social, and personal themes were not accurately assessed and were also not mentioned in pre-trip literature. Therefore, although some prediction is possible, it is mostly related to general themes which most likely reflected the marketing of the trip and the trip's unique wilderness location. Replication of this study with some modifications of the experience preference scale will allow a more accurate assessment of the anticipated benefits.

Furthermore, the objective of this research has been to contribute empirically to the theory of recreation benefits. By following the prescribed methods of Schreyer and Driver (1989), it appears this research has made an initial contribution to the understanding of the measurement and impacts of benefits. However, more work needs to be done in terms of developing a consistent benefits scale which could determine clearly the gains and losses of recreation benefits and how they might relate to certain activities.This work could begin by examining experience preference scales such as the type utilized in this study.

Finally, more research should seek to determine if recreation benefits are stable

among a cross-section of recreation activities. For example, could the benefits scale used in this study be applied to other activities in the outdoors such as hiking and canoeing? Would the results be similar? How might the anticipation and realization of benefits be affected by a commercial trip such as the one used in the present study? Also, since this study examined only the immediate post-trip benefits, it would be interesting to examine if the beneficial outcomes carry-over in the long term to everyday life. Questions such as these seek answers and offer interesting opportunities for further research.

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Table 1

Personal Recreation Benefits

Personal Development
- Self-Concept
- Self-Actualization
- Self-reliance
- Value Clarification/Introspection
- Humility
- Leadership
- Spiritual Growth
- Aesthetic Enhancement
- Learning
- Achievement/Skills Development
- Challenge

Therapeutic/Healing
- Clinical Problems
- Stress/Tension Mediation
  - Quiet/Peace
  - Stress Release
  - To Recharge Batteries
- Physical Rest/Relaxation

Independence/Freedom

Nostalgia

Experiential
- Good Time
- Passing Time/Leisure
- New Experience
- Seeing Sights
- Pleasure/Enjoyment
- Spontaneity
- Fantasy

Social Bonding
- Family Kinship
- Kinship with Significant Others
- Meeting New People
- Group Solidarity
- To Tell Others
- Experience
- Nurturance
- Cultural Awareness
- Solitude
- Escape Family

Physical Fitness/ Health
- Exercise
- Getting Tan/Sun

Stimulation
- Fun
- Excitement
- Recreation
- Adventure
- Exploration
- General Stimulation

Commodity-Related

Relations with Nature
- Enjoyment of Nature
- To be Outdoors
- Fresh Air
- Good Weather
- Scenery
- Relationships with Place

Source: Schreyer and Driver (1989). Derived from Interviews with Respondents at the Delaware Water Gap National Recreation Area and Upper Delaware Scenic and Recreational Rivers.

Table 2

Mean-Scores of Realized Benefit Items

Items	Mean*
Seeing new places	1.55
Getting away from civilisation for awhile	1.43
Having a change from my daily routine	1.39
Forgetting about work for awhile	1.39
Getting away from the demands of everyday life	1.33
Doing something I've never done before	1.31
Experiencing a change of pace	1.29
Being outdoors	1.29
Gaining respect for the environment	1.29
Being closer to nature	1.29
Being inspired by nature	1.27
Enjoying the company of the people who came with me	1.21
Gaining a better understanding of the natural environment	1.19
Experiencing surroundings that are soothing	1.18
Enjoying quality time with my family	1.16
Seeking out new experiences	1.15
Relaxing physically	1.15
Having a good experience with my family	1.14
Helping me enjoy life more	1.12
Worrying less	1.10
Broadening my outlook on life	1.09
Exploring things	1.08
Feeling exhilaration	1.08
Gaining an overall sense of well-being	1.08
Having my mind move at a slower pace	1.06
Renewing my energy	1.06
Gaining the knowledge of how to be comfortable in nature	1.05
Gaining a sense of peacefulness	1.03
Releasing my stress	1.02
Feeling more relaxed	0.99
Realizing the value of new relationships	0.98
Improving my ability to trust others	0.98
Being away from crowds of people	0.97
Expanding my interests	0.97
Experiencing the unknown	0.96
Participating as a team member	0.95
Heightening my sense of adventure	0.94
Gaining an appreciation for wildlife	0.93
Helping to release or reduce some built up tension	0.93
Gaining the knowledge of my personal capabilities	0.92
Meeting new people	0.91
Collecting my thoughts	0.91
Being more compassionate	0.90
Learning how to better understand people	0.88

Table 2 (cont.)

Mean-Scores of Realized Benefit Items

Items	Mean*
Having a more positive feeling of myself	0.88
Feeling less constrained in my thought and actions	0.88
Becoming more safety conscious	0.88
Increasing my ability to deal with diverse groups of people	0.88
Gaining a sense of freedom	0.88
Feeling better about myself	0.87
Improving relationships with my family	0.87
Feeling more comfortable in social situations	0.86
Being able to change to meet new situations	0.86
Building new friendships	0.84
Forming new lasting relationships	0.84
Coping with new mental challenges	0.83
Growing as a person	0.82
Developing personal spiritual values	0.81
Giving myself inner strength	0.81
Being with others who enjoy the same things I do	0.80
Developing better social skills	0.72
Feeling more in control of my life	0.67
Increasing my self-confidence	0.64
Becoming more relaxed around large groups of people	0.63
Feeling good after being physically active	0.61
Freeing myself to think creatively	0.60
Improving my physical health	0.57
Improving my ability to face challenges	0.54
Getting exercise	0.49
Experiencing uncertainty	0.47
Improving my physical coordination	0.44
Facing dangerous situations	0.39
Taking risks	0.36
Being free to make my own choices	0.24

***Based on scale of 2= Well Above Expectations, 1= Above Expectations, -1= Below Expectations**

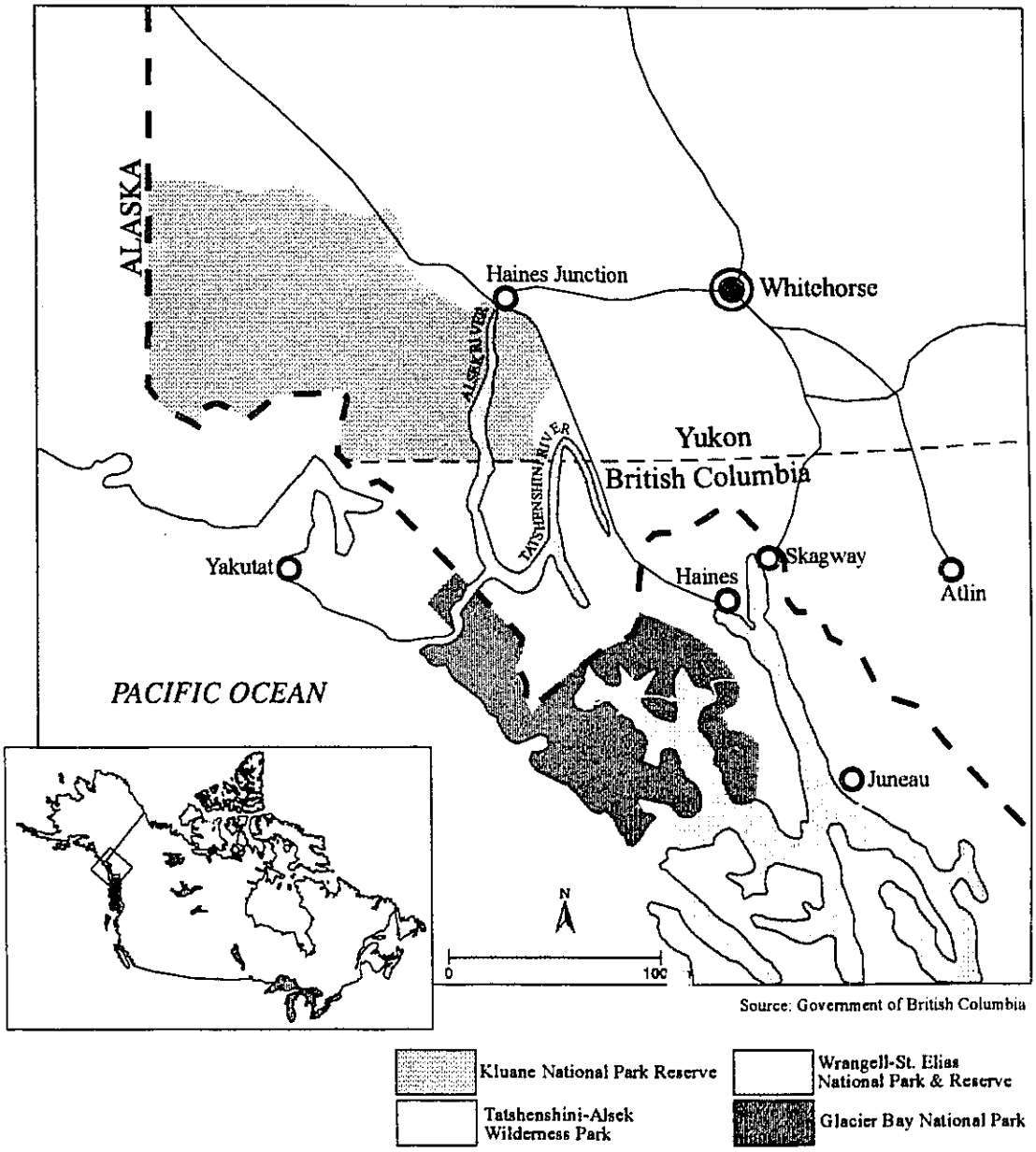

Figure 1. Study Area

Figure 2
Expectations of Anticipated and Realized Benefit Items

Realized Benefit Items	Not Important	Somewhat Important	Important	Very Important
Well-Above Expectations				Seeing new places
Above Expectations	Realizing the value of new relationships	Having a good experience w/family Enjoying quality time with my family Worrying less	Having a change from my daily routine Experiencing a change of pace Experiencing the unknown	Being outdoors Getting away from civilization for awhile Getting away from demands of everyday life
Just Above Expectations	Facing dangerous situations Becoming more safety concious Learning how to better understand people	Growing as a person Increasing my self-confidence Building new friendships	Gaining a sense of freedom Improving my physical health Getting exercise	
Met Expectations		Taking risks Being free to make my own choices		

Anticipated Benefit Items

Figure 3
Expectations of Anticipated and Realized Benefit Dimensions

Realized Benefit Dimensions	Not Important	Somewhat Important	Important	Very Important
Well-Above Expectations				Nature/Outdoors
Above Expectations		Family Bonding	Adventure/Risk Escaping Routine	
Just Above Expectations		Social Skills Personal Confidence	Well-Being Physical Health and Exercise	
Met Expectations				

Anticipated Benefit Dimensions

Conclusion: The Future of Recreation Benefits Research

Summary

There were two main objectives in this research: verifying and enhancing previous research by Schreyer and Driver (1989), and contributing empirically to the theoretical understanding of recreation benefits. Both of these objectives were met by the design, administration, and analysis of a pre-trip and post-trip benefits items scale which empirically measured the anticipated and realized benefits of participants in five 12-day wilderness raft-trips.

The two papers within the thesis addressed the main objectives of the study, as well as more specific objectives related to each individual paper. For example, the first paper was an initial step at empirical measurement of recreation benefits. In addition, the papers sought to verify and refine the recreation benefit domains postulated by Schreyer and Driver (1989). This was accomplished, producing eight empirical dimensions which demonstrated that, although some domains were similar to those highlighted by Schreyer and Driver (e.g., Nature/Outdoors), there were others that were not included in their original list (e.g., Family Bonding).

A question left unanswered by the first paper was, To what extent were the pre-trip anticipations realized by the participants of the trip? The second paper addressed this issue and sought to determine if the participants of the raft trips did indeed benefit from their experience, and in what ways. Using the findings of the first paper, it was shown that some benefit items that were anticipated highly at the outset of the trips, such as "Seeing new places", were highly realized at the end of the trip. However, there were some items that represented unexpected benefits, such as "Realizing the value of new relationships." Furthermore, through the use of personal comments, and an overall trip expectation variable, a subjective element was added to the paper which confirmed that most participants did indeed benefit from their trip, both in expected and unexpected ways.

Implications

The most important aspect of this original research is its empirical contribution to the theoretical understanding of recreation benefits. By gaining a better theoretical understanding of benefits through empirical measurement, more questions can be raised. For example, now that empirical data exist which verify the types of recreation benefits that participants may realize on a wilderness raft-trip, one can begin to examine the range of benefits as they relate to other forms of recreation and in other outdoor settings.

Understanding the benefits of recreation can also offer numerous practical applications. For example, policy regarding the allocation of specific land resources can be better developed and implemented if the specific benefits of an area are known. According to Butler (1989), recreation of today's baby-boomers will increase as more and more of them reach retirement age. Unlike the generation before them, these people may be expected to spend more time recreating in wilderness areas, such as those found in the Canadian north. With an awareness of the types of benefits an area can provide to people, managers will be able to deal with the increased pressures of wilderness recreation in the future. However, practical applications of benefits can apply not only to recreation resource managers, but to commercial users of the wilderness. Commercial operators of wilderness recreation tours can orient their marketing and trips towards the types of benefits their customers may be seeking.

Reflection

At this point it becomes important to ask if the type of quantitative scale used in this study accurately depicts the benefits that participants of recreational activities anticipate and realize. For the purposes of leisure research and recreation resource management, quantitative scales such as the one used in this study most likely give an accurate enough assessment of the benefits people hope to obtain through their participation. This conclusion is based on the belief that the type of scale used in this study can be efficiently administered, analyzed, and placed in an existing management agenda. However, besides relying solely on quantitative measures to gain information of recreation benefits, it would

also be useful to add an additional qualitative component. For example, the open-ended responses used in the present study allowed the researcher to place an over-all subjective element to the results.

From a personal viewpoint, however, it seems doubtful that quantitative scales can capture the entire range and complexity of the intrinsic benefits that wilderness recreation can provide to an individual. Although it is easy to rank on a scale the numerous benefits recreation can provide, this procedure seems to miss the essence of the actual experience. How can one measure for instance, the euphoria people have when they complete a 12-day wilderness raft-trip, having bonded so closely to people that were complete strangers only two weeks before? How does one begin to measure the effect on people of being surrounded by pristine wilderness with absolutely no sign of civilization other than what and who is with you?

Although quantitative scales may give insight into a range of benefits an area can provide, they fall short of measuring the intangibles implied in the questions above. However, that does not mean one should not strive to find the answers. As our population grows, areas for recreation will most likely diminish. Therefore, it becomes crucial that a deeper understanding of the range of benefits outdoor recreation can provide be developed among the providers and managers of recreation resources. Finally, with an understanding of the recreation benefits derived from recreation participation, one can begin to gain broader insight into human behavior within a recreation and leisure context.

References

Butler, R. (1989). The future. In G. Wall (Ed.), *Outdoor recreation in Canada* (pp. 277-310). Toronto: John Wiley & Sons.

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Appendix I

Pre-trip Questionnaire

RAFTING ON THE TATSHENSHINI/ALSEK RIVERS:

A SURVEY OF TRIP PARTICIPANTS

John Colton
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THIS FIRST SECTION OF THE QUESTIONNAIRE FOCUSES ON YOUR PAST AND PRESENT CAMPING, RAFTING, AND CANOEING EXPERIENCE.

Q-1 How long have you been camping on a regular basis? (Circle one number).

1 ONE YEAR OR LESS

2 ONE TO FIVE YEARS

3 SIX TO TEN YEARS

4 ELEVEN TO FIFTEEN YEARS

5 SIXTEEN YEARS OR MORE

Q-2 In which of the following types of camping have you participated? (Circle all relevant numbers).

1 CAMPING IN LARGER CAMPGROUNDS WITH SHOWERS, WASHROOMS AND OTHER MODERN CONVENIENCES

2 CAMPING IN MEDIUM TO SMALLER CAMPGROUNDS WITH DRY PIT TOILETS AND WATER SUPPLY ONLY

3 CAMPING IN THE BACKCOUNTRY WITH NO FACILITIES

Q-3 Which of the types of camping listed above have you done most of in the last 5 years? (Circle one number).

1 CAMPING IN LARGER CAMPGROUNDS WITH SHOWERS, WASHROOMS AND OTHER MODERN CONVENIENCES

2 CAMPING IN MEDIUM TO SMALLER CAMPGROUNDS WITH DRY PIT TOILETS AND WATER SUPPLY ONLY

3 CAMPING IN THE BACKCOUNTRY WITH NO FACILITIES

Q-4 Which of the types of camping do you *most enjoy?* (Circle one number).

1 CAMPING IN LARGER CAMPGROUNDS WITH SHOWERS, WASHROOMS AND OTHER MODERN CONVENIENCES

2 CAMPING IN MEDIUM TO SMALLER CAMPGROUNDS WITH DRY PIT TOILETS AND WATER SUPPLY ONLY

3 CAMPING IN THE BACKCOUNTRY WITH NO FACILITIES

Q-5 Have you ever previously participated in a guided wilderness raft or canoe trip? (Circle number).

1 YES

2 NO (SKIP TO QUESTION 7)

Q-6 How many other guided wilderness raft or canoe trips have you participated in? (Circle number).

1 ONE OR TWO

2 THREE OR FOUR

3 FIVE OR SIX

4 SEVEN OR MORE

PEOPLE MAY HAVE DIFFERENT REASONS FOR CHOOSING THE TATSHENSHINI/ALSEK RIVERS. THEREFORE, IT IS IMPORTANT THAT WE KNOW WHY YOU CHOSE THESE RIVERS.

Q-7 How did you first find out about the Tatshenshini/Alsek Rivers for this trip? (Circle all relevant numbers).

1 FRIENDS OR FAMILY WHO HAVE BEEN THERE

2 MAGAZINE ARTICLE

3 MAGAZINE ADVERTISEMENT

4 OUTFITTER BROCHURE

5 SLIDE SHOW

6 OTHER (Please specify) _____

Q-8 Why did you choose to go with a commercial outfitter as opposed to a privately organized and outfitted trip? (Circle all relevant numbers).

1 AN ORGANIZED TRIP IS MORE CONVENIENT

2 I DON'T HAVE TIME AND ENERGY TO ORGANIZE A PRIVATE TRIP

3 MY FRIENDS AND FAMILY WERE MORE INTERESTED IN A GUIDED TRIP

4 I DIDN'T KNOW HOW TO ORGANIZE A PRIVATE TRIP

5 SAFETY OF OUTFITTER

6 LACK OF KNOWLEDGE OF WILDERNESS TRAVEL TECHNIQUES

7 OTHER (Please specify) _____

Q-9 What made you choose Canadian River Expeditions as opposed to other outfitters on the river? (Circle all relevant numbers).

1 MY SCHEDULE MATCHED THEIR AVAILABLE DATES

2 I RECEIVED RECOMMENDATIONS FROM FRIENDS OR FAMILY

3 THE ATTENTION TO DETAIL EXPRESSED IN INFORMATION PACKAGE

4 THE PERSONAL ATTENTION RECEIVED FROM CANADIAN RIVER EXPEDITIONS

5 THE ENVIRONMENTAL SENSITIVITY EXPRESSED BY CANADIAN RIVER EXPEDITIONS

6 OTHER (Please specify) _____

MANAGERS OF PUBLIC RECREATION AREAS ARE BECOMING VERY INTERESTED IN PROVIDING HIGH QUALITY RECREATIONAL OPPORTUNITIES TO PEOPLE SUCH AS YOURSELF. FOR THAT REASON, WE ARE INTERESTED IN DETERMINING WHAT PROMPTS PEOPLE TO ENGAGE IN A PARTICULAR RECREATIONAL ACTIVITY.

Q-10 One indication of a high quality recreational opportunity is the degree to which it permits a person to meet his or her expectations. The statements below summarize many of the benefits that people may be hoping to achieve when they participate in recreation. Please note the importance of each benefit to you personally as something you hope to achieve on this trip.

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT
Releasing my stress	1	2	3	4
Increasing my self-confidence	1	2	3	4
Collecting my thoughts	1	2	3	4
Coping with new mental challenges	1	2	3	4
Having a more positive opinion of myself	1	2	3	4

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT
Forgetting about work for awhile	1	2	3	4
Having a good experience with my family	1	2	3	4
Developing better social skills	1	2	3	4
Feeling more in control of my life	1	2	3	4
Being away from crowds of people	1	2	3	4
Getting away from the usual demands of everyday life	1	2	3	4
Relaxing physically	1	2	3	4
Gaining the knowledge of how to be comfortable in nature	1	2	3	4
Gaining an appreciation for wildlife	1	2	3	4
Developing personal spiritual values	1	2	3	4
Gaining an overall sense of well-being	1	2	3	4
Participating as a team member	1	2	3	4
Gaining the knowledge of my personal capabilities	1	2	3	4
Feeling less constrained in my thought and actions	1	2	3	4
Being with others who enjoy the same things I do	1	2	3	4
Improving my ability to face challenges	1	2	3	4
Feeling exhilaration	1	2	3	4
Seeing new places	1	2	3	4
Building new friendships	1	2	3	4
Being inspired by nature	1	2	3	4
Being able to change to meet new situations	1	2	3	4
Gaining a sense of peacefulness	1	2	3	4
Gaining a greater understanding of the natural environment	1	2	3	4
Being closer to nature	1	2	3	4
Getting exercise	1	2	3	4
Helping to release or reduce some built-up tensions	1	2	3	4

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT
Facing dangerous situations	1	2	3	4
Expanding my interests	1	2	3	4
Renewing my energy	1	2	3	4
Broadening my outlook on life	1	2	3	4
Forming new lasting relationships	1	2	3	4
Meeting new people	1	2	3	4
Exploring things	1	2	3	4
Having my mind move at a slower pace	1	2	3	4
Experiencing surroundings that are soothing	1	2	3	4
Feeling better about myself	1	2	3	4
Seeking out new experiences	1	2	3	4
Experiencing a change of pace	1	2	3	4
Heightening my sense of adventure	1	2	3	4
Improving my physical coordination	1	2	3	4
Being free to make my own choices	1	2	3	4
Feeling good after being physically active	1	2	3	4
Being outdoors	1	2	3	4
Helping me enjoy life more	1	2	3	4
Improving my ability to trust others	1	2	3	4
Worrying less	1	2	3	4
Growing as a person	1	2	3	4
Enjoying the company of people who came with me	1	2	3	4
Gaining respect for the environment	1	2	3	4
Experiencing uncertainty of not knowing what will happen	1	2	3	4
Enjoying quality time with my family	1	2	3	4
Giving myself inner strength	1	2	3	4
Being more compassionate	1	2	3	4
Realizing the value of new relationships	1	2	3	4
Experiencing the unknown	1	2	3	4

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT
Learning how to better understand people	1	2	3	4
Having a change from my daily routine	1	2	3	4
Getting away from civilization for a while	1	2	3	4
Freeing myself to think creatively	1	2	3	4
Increasing my ability to deal with diverse groups of people	1	2	3	4
Improving relationships with my family	1	2	3	4
Feeling more relaxed	1	2	3	4
Taking risks	1	2	3	4
Gaining a sense of freedom	1	2	3	4
Feeling more comfortable in social situations	1	2	3	4
Doing something I've never done before	1	2	3	4
Becoming more safety conscious	1	2	3	4
Becoming more relaxed around large groups of people	1	2	3	4
Improving my physical health	1	2	3	4

FINALLY, WE WOULD LIKE A FEW FACTS ABOUT YOURSELF. THESE QUESTIONS WILL BE USED FOR CLASSIFICATION PURPOSES ONLY. LIKE THE REST OF THE QUESTIONNAIRE, YOUR ANSWERS WILL BE KEPT COMPLETELY CONFIDENTIAL.

Q-11 Are you male or female? (Circle number).

1 MALE

2 FEMALE

Q-12 In what year were you born? 19____

Q-13 In what country do you live? (Circle number).

1 CANADA

2 U.S.A.

3 OTHER (Please specify) _____

Q-14 What is your present place of residence? (Circle number).

1 MAJOR CITY (OVER 500,000 PEOPLE)

2 SMALL CITY (100,000 TO 500,000 PEOPLE)

3 LARGE TOWN (15,000-100,000 PEOPLE)

4 SMALL TOWN (UNDER 15,000 PEOPLE)

5 RURAL, NON-FARM

6 FARM

7 OTHER (Please specify) _____

Q-15 What is the highest level of education you have completed? (Circle number).

1 ELEMENTARY SCHOOL (UP TO GRADE 6)

2 SECONDARY SCHOOL/HIGH SCHOOL (UP TO GRADE 12 OR 13)

3 POST-SECONDARY/TECHNICAL

4 SOME UNIVERSITY

5 UNIVERSITY GRADUATE

6 POST-GRADUATE

Q-16 How many people from your household received an income during the past 12 months? (Circle number).

1 ONE

2 TWO

3 THREE OR MORE

Q-17 In which of the following categories does the total annual income of your household fall? (Circle number).

1 LESS THAN $10 000

2 $10 001 TO $30 000

3 $30 001 TO $50 000

4 $50 001 TO $70 000

5 $70 001 TO $90 000

6 $90 001 OR MORE

Appendix II

Post-trip Questionnaire

RAFTING ON THE TATSHENSHINI/ALSEK RIVERS:

POST-TRIP SURVEY

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NOW THAT YOU HAVE REACHED THE END OF YOUR RAFT TRIP ON THE TATSHENSHINI/ALSEK RIVER, WE ARE CURIOUS TO KNOW IF THE TRIP MET YOUR EXPECTATIONS.

Q-1 One indication of a high quality recreational opportunity is the degree to which it permits a person to meet his or her expectations, and/or exceed them. The statements below summarize many of the benefits that people may be hoping to achieve when they participate in recreation. Since you have just completed your river trip, we would like to know if your experience met your expectations of the trip. (Please circle the appropriate number for each item).

	WAS NOT EXPECTING	BELOW EXPECTATIONS	ABOVE EXPECTATIONS	WELL BEYOND EXPECTATIONS
Releasing my stress	1	2	3	4
Increasing my self-confidence	1	2	3	4
Collecting my thoughts	1	2	3	4
Coping with new mental challenges	1	2	3	4
Having a more positive opinion of myself	1	2	3	4
Forgetting about work for awhile	1	2	3	4
Having a good experience with my family	1	2	3	4
Developing better social skills	1	2	3	4
Feeling more in control of my life	1	2	3	4
Being away from crowds of people	1	2	3	4
Getting away from the usual demands of everyday life	1	2	3	4
Relaxing physically	1	2	3	4
Gaining the knowledge of how to be comfortable in nature	1	2	3	4
Gaining an appreciation for wildlife	1	2	3	4
Developing personal spiritual values	1	2	3	4
Gaining an overall sense of well-being	1	2	3	4
Participating as a team member	1	2	3	4
Gaining the knowledge of my personal capabilities	1	2	3	4
Feeling less constrained in my thought and actions	1	2	3	4

	WAS NOT EXPECTING	BELOW EXPECTATIONS	ABOVE EXPECTATIONS	WELL BEYOND EXPECTATIONS
Being with others who enjoy the same things I do	1	2	3	4
Improving my ability to face challenges	1	2	3	4
Feeling exhilaration	1	2	3	4
Seeing new places	1	2	3	4
Building new friendships	1	2	3	4
Being inspired by nature	1	2	3	4
Being able to change to meet new situations	1	2	3	4
Gaining a sense of peacefulness	1	2	3	4
Gaining a greater understanding of the natural environment	1	2	3	4
Being closer to nature	1	2	3	4
Getting exercise	1	2	3	4
Helping to release or reduce some built-up tensions	1	2	3	4
Facing dangerous situations	1	2	3	4
Expanding my interests	1	2	3	4
Renewing my energy	1	2	3	4
Broadening my outlook on life	1	2	3	4
Forming new lasting relationships	1	2	3	4
Meeting new people	1	2	3	4
Exploring things	1	2	3	4
Having my mind move at a slower pace	1	2	3	4
Experiencing surroundings that are soothing	1	2	3	4
Feeling better about myself	1	2	3	4
Seeking out new experiences	1	2	3	4
Experiencing a change of pace	1	2	3	4
Heightening my sense of adventure	1	2	3	4
Improving my physical coordination	1	2	3	4
Being free to make my own choices	1	2	3	4
Feeling good after being physically active	1	2	3	4

	WAS NOT EXPECTING	BELOW EXPECTATIONS	ABOVE EXPECTATIONS	WELL BEYOND EXPECTATIONS
Being outdoors	1	2	3	4
Helping me enjoy life more	1	2	3	4
Improving my ability to trust others	1	2	3	4
Worrying less	1	2	3	4
Growing as a person	1	2	3	4
Enjoying the company of people who came with me	1	2	3	4
Gaining respect for the environment	1	2	3	4
Experiencing uncertainty of not knowing what will happen	1	2	3	4
Enjoying quality time with my family	1	2	3	4
Giving myself inner strength	1	2	3	4
Being more compassionate	1	2	3	4
Realizing the value of new relationships	1	2	3	4
Experiencing the unknown	1	2	3	4
Learning how to better understand people	1	2	3	4
Having a change from my daily routine	1	2	3	4
Getting away from civilization for a while	1	2	3	4
Freeing myself to think creatively	1	2	3	4
Increasing my ability to deal with diverse groups of people	1	2	3	4
Improving relationships with my family	1	2	3	4
Feeling more relaxed	1	2	3	4
Taking risks	1	2	3	4
Gaining a sense of freedom	1	2	3	4
Feeling more comfortable in social situations	1	2	3	4
Doing something I've never done before	1	2	3	4
Becoming more safety conscious	1	2	3	4
Becoming more relaxed around large groups of people	1	2	3	4
Improving my physical health	1	2	3	4

Q-2 Thinking about the trip as a whole, would you say that it exceeded your expectations, was less than your expectations, or was about what you expected? (Circle number).

1 IT EXCEEDED MY EXPECTATIONS (GO TO QUESTION 3 THEN QUESTION 5)

2 IT WAS LESS THAN MY EXPECTATIONS (GO TO QUESTION 4 THEN QUESTION 5)

3 IT WAS ABOUT WHAT I EXPECTED (GO TO QUESTION 5)

Q-3 Would you mind telling us, in a few words, what aspects of the trip, if any, *exceeded* your expectations?

_____

_____

_____

_____

_____

_____

_____

Q-4 Would you mind telling us, in a few words, what aspects of the trip, if any, were *less than* what you expected?

_____

_____

_____

_____

_____

_____

_____

PLEASE ANSWER THE FOLLOWING QUESTION *REGARDLESS OF YOUR ANSWER TO QUESTION 3 OR 4.*

Q-5 We hope you enjoyed your trip and that it met the expectations that you were hoping for. Perhaps, though, there were certain aspects that you did *not* enjoy, so that some of your pre-trip expectations were not fulfilled to the extent you had hoped. How important are each of the reasons listed below for not meeting your expectations? (Circle *one* number for each reason).

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT
Weather conditions	1	2	3	4
I was out of shape	1	2	3	4
Seeing other groups on river	1	2	3	4
Scared of bears	1	2	3	4
The trip was too long	1	2	3	4
I didn't learn anything	1	2	3	4
I was nervous of the rapids	1	2	3	4
I felt too shy	1	2	3	4
I could not stop thinking of work	1	2	3	4
The trip was too short	1	2	3	4
Problems with food	1	2	3	4
Lack of privacy	1	2	3	4
Too cold	1	2	3	4
Other people's behavior	1	2	3	4
Too many hikes	1	2	3	4
Problems with the guides	1	2	3	4
Days too long	1	2	3	4
Could not get along with someone	1	2	3	4

Other (please specify) _____

_____

_____