

CHARACTERISTICS, MOTIVATION, ATTITUDES, AND BEHAVIOUR
OF SELECTED OUTDOOR PARTICIPANTS

by

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B Sc (Honors), University of Toronto, 1966

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in the Faculty

of

Education

20 Sept 82

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UNIVERSITY OF VICTORIA

March 1982

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ABSTRACT

The purposes of this study were to analyze the differences in characteristics, motivations, attitudes, and values related to outdoor activity between the Victoria Chapter of the Sierra Club and the Victoria Fish and Game Club. Specifically the following variables were compared: (1) demographic characteristics, (2) motivation related to outdoor activity, (3) attitudes to the outdoors and outdoor activities, (4) values related to the outdoors, and (5) behaviour in an outdoor setting.

Twenty randomly selected members of each club were given a questionnaire concerning their personal characteristics, their reasons for participating in outdoor activities, and their attitudes toward the outdoors and outdoor situations. Interviews were then conducted to obtain an understanding of personal values related to the outdoors. Finally, participant observation techniques were used to examine outdoor behaviour with a small number of subjects.

A combination of chi-square tests of independence, t-tests, and factor analysis were used to examine the data. Sierra Club members were found to be better educated, work at higher status jobs, and have been born in larger urban areas than members of the Fish and Game Club.

Fish and Game Club members had more money invested in outdoor equipment and spent more money per year on outdoor activities

Motivation for outdoor involvement was similar between the two groups, although members of the Fish and Game Club were significantly more likely to pursue outdoor activity for mental rewards such as self-achievement, self-development, and excitement than were members of the Sierra Club

Sierra Club members scored higher on a wilderness-purist scale and were more likely to support a "no trace camping ethic" than members of the Fish and Game Club. When members of the Fish and Game Club were considered by themselves, however, significantly more members supported the "no trace camping ethic" than supported an ethic that allowed the building of fires and the cutting of trees. There was no difference in the degree of security members of the two groups felt when they were in the outdoors

No significant difference in behaviour was obtained, possibly because of the small number of subjects who were involved in the field observations. However, valuable information was collected and discussed regarding the use of participant observation in an outdoor setting

Few significant correlations were obtained between the various tests used. This indicates that the tests were measuring different factors and raises a question as to the degree of consistency between the various aspects of the individual. A common vocabulary and uniform experimental procedures are needed to give a theoretical framework

for these relationships and to structure future research.



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ACKNOWLEDGEMENTS

I would like to express my sincere thanks to my advisor, Dr Bruce L. Howe, for his guidance and support. He always took my education seriously and as a result, made my Masters program a very valuable experience

My thanks also goes to Dr. G. Van Gyn for her interest in this project and for her assistance during its formulation. I would also like to thank Dr. A. Drengson for his thought provoking comments.

Appreciation is extended to Dr. J. Bavelas for acting as the external examiner of the thesis

Finally, a special bouquet to a wife and daughter who gave me their unflinching support.

CHAPTER 1

The Problem

Introduction

The outdoors has been an integral part of human existence for the satisfaction of both physical and psychological needs throughout civilized history. In North America, the first inhabitants founded a culture that had both a physical and spiritual basis in the natural world. The first European settlers relied on abundant wildlife and fish for food and income. In addition, it appears that hunting and fishing were very popular recreation activities as writings and paintings of that period make frequent references to the satisfactions of these activities (Polk, 1972). In the 1980's, for the vast majority of the population, hunting and fishing are no longer required to satisfy physical needs but may still fill an important psychological need.

Since the early 1960's there has been a tremendously increasing interest in outdoor activities other than hunting and fishing. These new activities such as backpacking, recreational canoeing, and climbing, have been labelled non-consuming and considerable effort has been made to show their superiority on ecological and moral grounds over the consuming activities of the past (Shaw, 1974). The arguments of those who considered their activities to have little effect on the environment appeared at first to have produced a response as the sale

of hunting licences declined in Canada from 1971 to 1974. However, between 1974 and 1977 there was an 11 per cent increase in the number of hunting licenses bought in Canada despite a decline of approximately 2.5 per cent in rural and small town populations (Statistics Canada, 1979), the groups that many previous studies have found to be most closely associated with hunting.

Demographic, social and economic characteristics all appear to have an influence on the choice of outdoor recreation activity. Most researchers have found age to be the most important factor, participation declining with increasing age (Outdoor Recreation Review Commission, 1962). Other user characteristics seem to depend more on the type of activity, its distance from urban centres, the expense of being involved, and perhaps the methods that were used for selecting the experimental subjects.

Motivation for outdoor activity seems to be remarkably consistent across activities. Hikers rate aesthetic and emotional experience as the most important aspect of their activity (Shafer & Mietz, 1969) while hunters rate nature appreciation and skill as the most important components of their sport (Hautaluoma & Brown, 1978). However, even though participants in different activities may give similar responses for their involvement in a specific sport, each activity seems to have unique characteristics that make substituting one for another very difficult if the same level of satisfaction is to be maintained (Meyer, 1978).

In addition to the attraction to the unique characteristics of a particular activity, outdoor recreation participants may have different attitudes toward various outdoor activities and toward the outdoors in general. Hendee, Catton, Marlow, and Brockman (1968) showed wilderness users could be divided in terms of their beliefs concerning the environmental, aesthetic, and social conditions that were important to their activity. People who sought a more wilderness setting were identified as wilderness-purists and were more likely to be urban and well educated. Since hunters did not fit this category, at least up to the mid 1970's, it would be expected that they would not score high on the wilderness purist scale. On the other hand, hunters may have more environmental knowledge than either non-hunters or anti-hunters (Pomerantz, 1977).

More important than either motivation or attitudes is whether behaviour among various outdoor recreation groups differs in respect to the activities they have in common such as camping and food preparation. For example, do people who feel they require a pristine wilderness setting clean up after themselves any better than those who prefer crowded or multiple use sites? Do people who give the same responses to attitude tests actually behave the same in the outdoor environment? If the behaviours are different, how are the relative merits of each decided? For instance, a distinction is often made between so-called consuming activities and non-consuming activities but recent analysis has shown that the distinction may not be as clear as previously thought. The provision of parking

lots and trails for hikers, as an example, can severely damage plants and trees in an area and place considerable strain on wildlife (Wilkes, 1979)

A true understanding of behaviour can only be obtained in the actual environment in which it normally takes place (Bavelas, 1981). Methods for doing this have been developed under the broad category of participant observation (Johnson, 1975). Most studies of outdoor recreation have not used these methods because of the time commitment necessary, the difficulty of obtaining subjects, and the classification problems involved. However, it would seem to be necessary to attempt this work if any meaningful knowledge of outdoor recreation is to be obtained

Statement of the Problem

The purposes of this study were to analyze the differences in characteristics, motivations, attitudes and values related to outdoor activity between members of two organizations, one of which has traditionally been associated with hunting and fishing and the other with activities such as backpacking and climbing. In addition, the use of participant observation techniques was examined and behaviour comparisons made between the two groups. The first of these groups was the Victoria Fish and Game Club and the second was the Victoria Chapter of the Sierra Club of Canada. Both of these organizations support goals in conservation and outdoor user awareness.

In particular, this study tests the following null hypotheses

1. There is no significant difference in demographic characteristics between members of the Sierra Club and members of the Fish and Game Club.

2. There is no significant difference in motivation related to outdoor activity between members of the Sierra Club and members of the Fish and Game Club.

3. There is no significant difference in attitudes related to the outdoors between members of the Sierra Club and members of the Fish and Game Club.

4. There is no significant difference in values related to the outdoors between members of the Sierra Club and members of the Fish and Game Club.

5. There is no significant difference in outdoor behaviour, as measured by participant observation techniques, between members of the Sierra Club and members of the Fish and Game Club for activities that are common to both groups.

CHAPTER 2

Review of Literature

Growth of Outdoor Recreation

Rapid increases in outdoor recreation participation, commencing in the early 1950's, led to many studies that attempted to determine the nature of the phenomenon. In probably the largest survey to date, the Outdoor Recreation Review Commission (1962) (ORRC) found a 143 per cent increase in outdoor recreation activity between 1951 and 1959. The commission went on to project a three-fold increase in outdoor recreation by the year 2000. Swimming, driving for pleasure, walking for pleasure, playing outdoor games, picnicking, and sight seeing were expected to be the most popular activities. Fishing was projected to be twice as popular as camping and hunting more popular by 50 million activity days than hiking. Swimming outdoors would be 18 times as popular as hiking.

A later survey (1976) reported the participation levels for Canadians in outdoor recreation (Table 1). Neither the Canadian nor American survey obtained any measure of involvement in outdoor recreation activities such as rock climbing, spelunking, and parachuting. A study by Brown (1978) estimated that 0.1 per cent of the Canadian population were involved in six high risk activities and that, while participation was rising at a spectacular rate in some activities--

Table 1
 Percentage of Canadians 18 Years and Over Participating
 in Outdoor Recreation Activities

Activity	1967	1969	1972
Picnics	42	54	54
Power Boating	15	19	23
Tent Camping	14	17	19
Hunting	14	13	11
Snowmobiling	7	14	18
Trailer Camping	7	6	10
Canoeing	5	8	10

700 per cent in 10 years for parachuting--the numbers involved were still small especially when participation in other activities is considered.

Two additional measures of outdoor recreation activity are tent sales and number of hunting and fishing licences bought. For example, in Canada tent sales, expressed in 1967 dollars, rose from 1967 to 1973 but started to decline after 1973 and by 1976 had fallen below 1967 levels (Bevins, 1980). A similar decline was shown in overnight stays at National Parks (Statistics Canada, 1979). On the other hand, sale of hunting licences to Canadian residents decreased from 1971 to 1974 by 6 per cent but between 1976 and 1977

there was an 11 per cent increase despite a decline of approximately 2.5 per cent in rural and small town populations, the group ORRC (1962) found to be most closely associated with hunting, and the existence of 25 organizations in North America with anti-hunting positions (Frodelius, cited in Shaw, 1974). Sale of fishing licences to Canadian residents followed a similar pattern. In 1977 there were approximately 2.2 million hunting licences and 2.6 million fishing licences sold to Canadians (Statistics Canada, 1979)

While these studies have given some indication of involvement in outdoor recreation, they have major weaknesses in that they have not always been consistent in the method of contact between the researcher and the respondent, the time of year of the study, the age of those contacted, and the position of the respondent in the household (Bevins, 1980)

Demographic, Social and Economic Characteristics of Participants

Several demographic, economic, and social factors have been found to have an influence on outdoor recreation participation with age having the strongest effect (ORRC, 1962). With the exceptions of sightseeing and walking for pleasure, involvement in outdoor activities was negatively correlated with age. Participation was positively correlated with income and education. Professional and technical workers were twice as likely to engage in outdoor recreation activities as farm workers when the whole spectrum of outdoor recreation activities was considered. Urban people were more active than rural with suburban-

ites being more active than people from the city centre. Suburbanites probably had more money than those living in rural areas or city centres. Rural people may not have spent as much time involved in outdoor recreation because they worked in the outdoors and would prefer to take their recreation in another setting. However, rural populations were more involved in hunting and fishing.

Hendee, Catton, Marlow, and Brockman (1968) conducted a study of the characteristics, values, and management preferences of wilderness users in the Pacific Northwest. They mailed an eight page questionnaire to 1,964 outdoor users who had self-registered at three wilderness areas in Oregon and Washington States. Seventy-one per cent of the questionnaires were returned. Their results were similar to the ORRC (1962) results in many ways, with the majority of users being young to middle-aged adults. Sixty per cent of the respondents came from the top 10 per cent of the population in terms of educational attainment. Most of the wilderness use was either by small family groups or clusters of friends. Childless couples were less likely to participate than couples with children. Caution must be used with this data, however, because of a lack of knowledge about the characteristics of the 30 per cent who did not respond.

Contrary to the ORRC (1962) study, Hendee et al. (1968) found that rural or urban upbringing had no effect on the amount of wilderness use, but nearly 70 per cent of users had taken their first wilderness trip before they were 15 years old and approximately 30 per cent of the respondents belonged to at least one conservation group.

White (1971) and Vaux (1975) confirmed the positive correlations between outdoor recreation participation and age, education, and income. Lindsay and Ogle (1972), in their study of the socio-economic characteristics of outdoor recreation users in a park 10 minutes from a major urban area, found a different situation. In this case there was no significant difference between high and low income among the users and level of education and park use were negatively correlated. This study pointed to the possibility of increased wilderness use by those in higher socio-economic brackets being a factor of opportunity rather than any greater preference for public outdoor recreation in high income and educational groups.

The rural-urban variable discussed in the ORRC (1962) reports and by Hendee et al. (1968) must be viewed with caution as income and education were not controlled in either of the studies nor was exposure to rural values with family, church, school, etc. (Hendee, 1969).

Possible bias in the use of park registrants for survey purposes was studied by Lucas and Ottman (1971). People were watched as they entered the park and those who did not register were intercepted on the trail. Lucas and Ottman found that non-registrants answered many questions significantly differently from registrants. Non-registrants did less climbing, less swimming, were less likely to be members of a wilderness group, had completed less schooling and were less likely to be married. On the other hand, they did more fishing, were two or three times more likely to be farmers, clerks, or labourers, and were older than registrants

Jubenville (1971) found that responses from park registrants had a significant bias because the leader usually registered and as a consequence was the one to receive the questionnaire rather than another member of the group. This resulted in a significant overestimation toward males, higher education, higher income, professional and technical workers, and more camping experience. Other studies have shown no significant difference between mail responses and trail interviews, between those who respond to a questionnaire and those who do not (Peterson & Lime, 1973) and between early and late respondents to a mailed questionnaire (Wellman, Hawk, Roggenback, & Beckyoff, 1980).

Identifying characteristics of users, while important for resource development and a general understanding of the user profile, does not create a model that can be transferred to other locations and situations. Moncrief (1970) stated that, "the simpler user preference study is giving way to more sophisticated studies that hold the possibility of making a theoretical contribution" (p. 129). Actually, this does not seem to have happened, perhaps because most of the work in this field has been done by park officials who were mainly interested in user characteristics.

Motivational Research in Outdoor Recreation

A study of wilderness users in British Columbia showed that a hierarchy of motives influenced outdoor participation. Items concerning undisturbed natural resource features were judged very important while specific activity items were all given neutral ratings. Seeing

natural landscapes, wilderness camping, feeling close to nature, and escaping from civilization were very important to over 80 per cent of those questioned while fishing, photography, and being with friends were valuable to less than 50 per cent of the participants (Thorsell, 1971).

Meyer (1978), in a study of satisfactions derived from outdoor recreation, found that getting rid of tensions and frustrations, developing close contact with nature, and maintaining health were the most important considerations among the residents of three British Columbia communities.

Emotional and aesthetic experiences were five times more important to hikers in the northeastern U.S. than physical exercise or being alone (Shafer & Mietz, 1969). Hollender (1977) found that the opportunity to escape from the tensions of work, urban life, and the familiar, combined with the desire for a primitive lifestyle and aesthetic outdoor experiences accounted for 85 per cent of the variance in his study of the motivational dimensions of the camping experience.

Tranquility, desire to see natural beauty, and escape from urban life constituted the most important features of the wilderness for a group of university students (Rossman & Ulehla, 1977). Deer hunters rated nature appreciation and skill as the most satisfying components of their sport (Hautaluoma & Brown, 1978).

Crandall (1980) reported the results from two conferences of researchers involved in the study of motivation and leisure activity. At the first conference, participants agreed on a list of 17 needs

that could be important for leisure and that were probably discrete and comprehensive. These ranged from the relatively specific "enjoying nature" and "escape from routine" to the more general "self actualization". The second conference outlined 10 research questions and projects participants had agreed to pursue, among them the question of substituting one activity for another.

If the same needs were satisfied by several activities, then one activity could be substituted for another. Christensen and Yoesting (1977) found that "the degree of 'substitution' of recreation activities with activity types with similar satisfactions is dependent on the particular type involved" (p. 200). Hunting and fishing were found to present the most difficulty in terms of finding a substitute.

Meyer (1978) studied the issue of activity satisfactions for residents of Victoria, Vancouver, and Campbell River, in British Columbia, and concluded that "each activity possesses its own unique relative weighting of satisfactions, and that these satisfactions change as one moves from one activity to another. Consequently, there is no single recreational activity that is a perfect substitute for another" (p. 12). He further cautioned that "a more fundamental inquiry into the basic capability of communities to provide a full range of recreational satisfactions is required before particular activities are permitted to be degraded or are abandoned" (p. 12).

In addition to motivation for outdoor activity, attitudes toward various outdoor activities and toward the outdoors in general, have

important implications for both the outdoor manager and the researcher who hopes to understand the nature of the outdoor user.

Attitudinal Factors in Outdoor Recreation

Attitude Theory

Allport (1935) reviewed the literature on attitudes and collected more than 100 definitions of attitudes. Most of the writers agreed that an attitude was a learned predisposition to respond in either a favourable or unfavourable way to a particular object or group of objects. While this unidimensional concept of attitudes did not result in behaviour prediction, a critical weakness in any theory of attitudes, Allport did emphasize the complexity of attitude study

Rosenberg and Hovland (1960) stated that because predispositions to behaviour could not be seen, attitudes must be inferred from the way people react to a particular stimulus. The difficulty they encountered was the same as that which confronted Allport. While it was possible in an experimental setting to use a single response as an index of a person's attitude, in the natural setting uncontrollable variability made for great uncertainty in defining which behaviour was due to which attitude. People could respond in a similar manner to the same situation but for totally different reasons. This difficulty in theory and measurement was addressed by stating that for each stimulus there were three major types of responses cognitive, affective, and behavioural. Attitudes could then only accurately

be described if measures were obtained in all three areas.

Rokeach (1966) added an almost specific example of the above theory when he stated that it is necessary to consider attitudes toward situations in addition to attitudes toward subjects. According to this concept, in an experiment where an opinion is measured, a treatment given, and then the opinion measured again, any change would not necessarily reflect a change in attitude but rather a change in opinion for the new situation or else an interaction between the situation attitude and the object attitude.

Relationship Between Attitude and Behaviour

Knowledge of attitudes would be very useful if it could be used to predict behaviour but most studies have found a low correlation between attitude and behaviour. "After more than seventy-five years of attitude research, there is still little, if any, consistent evidence supporting the hypothesis that knowledge of an individual's attitude toward an object will allow one to predict the way he will behave with respect to the object" (Fishbein, 1967, p. 52). Ehrlich (1969), Lauer (1971), Heberlein (1973), and O'Riordan (1976) have expressed similar conclusions. Defining attitude as "a predisposition to behaviour" and then finding low correlations between the measured attitude and behaviour raises the questions as to the validity of the definition or the methods used to measure either attitudes or behaviour

An approach to overcoming the complex interactions between behaviour and attitudes has been to define attitudes totally in terms of behaviour (Skinner, 1953). While this approach can be very useful in a particular situation, it does not take into account the situational component of Rokeach (1966) or the cognitive and affective factors discussed by Rosenberg and Hovland (1960). Frankel (1969) pointed out that the behaviourist approach reduced human activity to the level of epiphenomena and eliminated the possibility of an understanding of the true nature of man. Even in a particular situation, inappropriate conclusions could be made about attitudes if only behaviour was considered, leading to incorrect counteractions and planning.

Attitudes and Motivation

Fishbein (1967) referred to motivation as one of the factors that must be considered in conjunction with attitudes in order to predict behaviour. In experimental studies, what one researcher called an attitudinal factor has been called a motivational factor by another researcher. With this overlapping of concepts, any relationship between the two needs to be examined.

Hodgkinson (1978) developed a model that conceptualized the relationship between the self, the motivational base, the value system, and the attitudes of the individual. At the centre of the model was the unitary self. Next came a few basic motives. Hodgkinson stated these might be simply the will to live or the dualism of will to live and the will to death described by Freud. Perhaps

it could also be the desire for meaning described by Frankl (1959). These deep seated motives are then manifested in a system of values. "These value complexes or value orientations depend upon the holder's circumstances, biography, and culture. They may be unconscious and in logical contradiction" (Hodgkinson, 1978, p. 108). At the interface between the self and the world were the more numerous attitudes and beyond these the almost infinite possibilities of behaviour. Motives and values were considered to be organized into systems while attitudes were "commensurable in so far as they can be observed, classified, and organized so as to make conceptual sense" (p. 108). Behaviours were not considered to be measurable by the same set of units and thus could not be organized. They were "connected by inference through chains of cause and effect to the psychological phenomena of attitudes, value orientations, values, motives, and self-concept" (p. 108).

Models such as Hodgkinson's could provide a structure for the analysis of many of the concerns expressed by researchers in their efforts to explain the connection between attitudes and behaviour. Factors of value and motivation lying close to the self must be examined if meaningful results are to be obtained.

Research on Attitude in Outdoor Recreation

Hendee, Catton, Marlow, and Brockman (1968) developed a scale called the Wilderism-Urbanism Attitude Test to examine the attitudes of wilderness park users in Washington and Oregon States. "Wildernist"

was a contraction of "wilderness" and "purist", while "urbanist" was a contraction of "urban" and "purist". The testing instrument was composed of 60 short questions related to wild-land recreation values. "The questions suggested 20 hypothetical liked or disliked features of wilderness-type areas, 20 activities deemed appropriate to wilderness-type areas, and 20 benefits that might be obtained from recreation in remote back country of wilderness character" (p 24). The items called for response on a 9-point scale, ranging from "strongly dislike" (-4) to "strongly favour" (+4) (Figure 1).

Figure 1
Wilderism-Urbanism Attitude Test

Example of Questionnaire Item	Strongly Dislike			Neutral			Strongly Favour		
Hiking	-4	-3	-2	-1	0	1	2	3	4
Powerboating	-4	-3	-2	-1	0	1	2	3	4
	Etc.								

Hendee et al described the operation of the test as follows

The questionnaire items were selected so that those persons with the most extreme wilderness-purist concepts would respond extremely positively or extremely negatively, depending on the item.

Conversely, those persons with extreme urban or convenience-oriented concepts would respond at the opposite end of the scale for each item (p. 24).

The initial 60 items in the questionnaire were reduced to 30 for further analysis by removing all items that achieved a gamma statistic less than $\frac{+}{-}$.50. Placement on the scale was then correlated with seven clusters of items that produced similar responses in wilderness users. Wilderist or wilderness-purist scores were positively correlated with factors called spartanism, antiartifactualism, primevalism, outdoorsmanship, and escapism. Negative correlation was obtained for items not reflecting man's humility in the natural environment and that involved social interaction.

When placement on the scale was related to characteristics, "the more wilderness-purist users were more likely to have been raised in urban areas, were highly educated, had more close friends who also participated in wilderness-type recreation, and were more likely to belong to one or more conservation organizations and outdoor clubs" (p. 28).

One of the difficulties with the Wilderist-Urbanist scale was the terminology. People with the lowest urbanist scores were more likely to be born in urban areas. Terms such as spartanism and antiartifactualism were not defined and in some cases seemed to be inappropriate. An additional concern was that what constituted wilderness-purist attitudes depended on how the researchers defined a wilderness-purist

Heberlein (1973) found that placement on the Wilderist-Urbanist scale was related to beliefs about the wilderness and relatively unrelated to any demographic factors. Individuals who had high urbanist scores tended to believe that the wilderness was uncomfortable and they would not be safe there. Heberlein also pointed out that Hendee et al. (1968) had given no indication whether placement on the scale was correlated with behaviour in the outdoors. Even considering these negative features however, Heberlein felt that the wilderist-urbanist scale was "probably the best of the user attitude surveys" (p. 19).

An important change in attitudes toward the outdoors has been the growing criticism of traditional consumptive wildlife sports and the corresponding increase in non-consuming activities (Shaw, 1974). An increasing number of groups in North America have voiced their disapproval of hunting in particular (Shaw, 1974). Membership in these anti-hunting groups, however, may not reflect the characteristics of the general population.

While it does not condemn hunting and thus could not be taken as indicative of anti-hunting groups, information collected concerning the Sierra Club illustrates how a particular group, in this case a conservation group, tends to attract a certain type of member. Devall (1970) found that only five per cent of the membership of the Sierra Club were clerical, salespersons, owners of small businesses, or unskilled workers as compared with 84 per cent in the general population (U.S. Census, 1970). Seventy-four per cent of the

members had a four year college degree and 36 per cent had advanced degrees. At the same time only nine per cent of the general population had a college degree (U.S Census, 1970).

Hunting and fishing have been traditional outdoor recreation activities. Hunters have been shown to have stronger traditional family values than do non-hunters (Moss, Shackelford, & Stokes, 1969). While this may have been an artifact of experimental design, i.e. the attitudes of hunters and non-hunters were confounded by a rural-urban variable, appreciation of the past has increased in importance at this point in time (Taylor & Konrad, 1980). This turning to traditional values may have been one of the factors that reversed the trend of declining hunting licence sales in the mid 1970's. Others may have been an inability of anti-hunting groups to obtain the popular support necessary to further reduce hunting and the growing realization that the concept of a "non-consuming wilderness user" was a myth (Wilkes, 1979). Whatever the reason, any increase in hunting activity could represent a significant change in attitudes, in behaviour, or in the interaction between attitudes and behaviour.

Surveys of motivations and attitudes are often used to give an indication of behaviour. It is the eventual behaviour that is of ultimate interest and that demonstrates the appropriateness of any projections or planning based on attitude and motivation studies

Understanding Human Behaviour

Any attempt to understand human behaviour immediately encounters complex questions concerning the importance and interactions of various factors related to activity. Do responses to paper and pencil tests about motivation and attitudes represent states that are central to the person or are they merely what the individual thinks is appropriate to the situation? Do groups or individuals that express different attitudes toward aspects of the outdoors behave differently in an outdoor environment?

Whitson (1978) questioned whether problems such as these could be answered using the "scientific method" that most social scientists have adopted. Rather than using the quantitative methods of the physical scientist, Johnson (1975) felt that the use of qualitative research was necessary to develop an understanding of human behaviour in its natural setting. Bogdan (1972) defined qualitative methodology as

. . . research procedures that produce descriptive or 'soft' data, not easily handled by statistical analysis. This methodological approach directs itself at human settings and individuals in them holistically--that is, the subject of the study, be it an organization or individuals, is not reduced to isolated variables or to hypotheses, but rather an attempt is made to look at it in context, from a comprehensive perspective. (p. 3)

The in-depth interview has been one of the techniques used to obtain information about the beliefs and experiences of individuals. Terkel (1967) recommended an open ended technique for interviewing

because he "realized quite early in this adventure that interviews, conventionally conducted, were meaningless. Conditioned cliches were certain to come. The question and answer technique may be of value in determining favoured detergents, toothpaste, and deodorants, but not in the discovery of men and women. It was simply a case of making conversation. And listening" (p. xx1). Terkel had key questions that he wanted to ask but he worded them idiomatically rather than academically and only introduced them when his companion was ready (Terkel, 1967).

Ethology, the methods of animal behaviour study originated by Konrad Lorenz (1970), has also been used in the study of human behaviour. "The method involves the recording of behaviour in its natural setting, without experimental interference. The observer tries to record as much of the setting as possible, i.e., anything that might be relevant, and subsequently analyzes the recorded data (i.e., field notes, films, or video-tapes) for statistical regularities" (Whitson, 1978, p. 26). The use of this technique in the study of human activity has been outlined by Blurton-Jones (1972, 1974).

Combining ethological techniques and results from methods such as in-depth interviews has given the social scientist information about behaviour and the motives and attitudes that lie behind actions. This understanding of behaviour is the aim of participant observation or field research, described by Johnson (1975, p. x) as "a manner of conducting a scientific investigation wherein the observer maintains a face-to-face involvement with the members of a particular social

setting for the purpose of scientific inquiry." The subject continues normal activity and indeed the observer may even take part.

Participant observers have been warned of the difficulties involved in obtaining access to a group, building and maintaining a trust relationship, and preserving the objectivity necessary to record reliably (Schwartz & Schwartz, 1955, Shaffir, Stebbins, & Turnowetz, 1980). Concern has also been expressed for the risks to the subjects of field research, including the possibility of information given to the researcher being misused either by the researcher or by individuals and groups who learn of the results (Cassell, 1978). Researchers, confronted by these problems, have developed and tested techniques for overcoming them or at least reducing their impact (Bogdan, 1972, Johnson, 1975, Schwartz & Schwartz, 1955, Shaffir, Stebbins, & Turowetz, 1980). In particular, rather than necessarily harming subjects in any way, properly conducted field research has been shown to provide benefits to those being observed (Cassell, 1978).

Johnson (1975) stated that "the research method must be related to the information sought" (p. 21). If the information sought is the relationship between behaviour and attitudinal-motivational factors, then a method is needed that allows the observation of behaviour and provides a technique for understanding the person acting. "Participant observation" has been used to achieve both goals.

Summary

Outdoor recreation has become an important leisure activity for an increasing number of people. Participation rates in most outdoor activities have increased dramatically since the early 1960's. Even hunting, which was showing a gradual decline until the mid 1970's, has increased in popularity recently.

Income, education, and living in an urban area have been positively correlated with involvement levels in outdoor activities, while age has produced a negative correlation.

Emotional and aesthetic experiences constituted the most important motivations for outdoor recreation participation. Specifically, developing close contacts with nature and escaping the tensions and frustrations of urban life were the predominant factors. In spite of these common satisfactions, substituting one activity for another without some loss of satisfaction has proven difficult because each activity also seems to have an unique motivating factor.

Attitudes among wilderness users varied from a wilderness-purist level to looking for more of the urban conveniences in the wilderness. Beliefs about the outdoors were the most important factor in determining placement on the scale used in measuring these attitudes.

The level of congruence between expressed attitudes and behaviour in the outdoors was identified as an area needing further study.

CHAPTER 3

Research Methods

Design

The intent of this study was to determine whether there were any differences in characteristics, motivation, attitude, and behaviour related to outdoor activity between members of the Victoria Fish and Game Club and the Victoria branch of the Sierra Club.

Randomly selected members of each club were given a questionnaire concerning their personal characteristics, their reasons for participating in outdoor activities, and their attitudes toward the outdoors and outdoor situations. Interviews were then conducted to obtain an understanding of personal values related to the outdoors. Field observation was used to examine outdoor behaviour.

Subjects

Twenty subjects were selected from the present membership list of each club using stratified random sampling based on sex. Further restrictions were that all subjects be 16 years or older and have participated in an outdoor activity related to their club at least once in the preceding 12 months. For members of the Fish and Game Club, the activities were either hunting or fishing and for the Sierra Club were either hiking, boating, or camping. While these

subjects took part in the questionnaire and interview sections of the study, participant observation in an outdoor setting was limited to those subjects already in the study who were taking part in an outdoor activity during the period of the study. These subjects were identified from their answers given to questions about their future outdoor activity (see Appendix F). Two subjects from these individuals were selected to represent each group.

Independent Variable

The independent variable in this study was group membership-- either the Victoria branch of the Sierra Club or the Victoria Fish and Game Club.

Dependent Variables

Dependent variables in this study were

1. *Participant characteristics.* Relevant participant characteristics were determined through responses to a questionnaire given to all subjects (see Appendix D).

2. *Attitudes toward the outdoors and outdoor activity.* These attitudes were recorded using the Wildernist-Urbanist Scale developed by Hendee, Catton, Maslow, and Brockman (1968). This instrument was included as part of the questionnaire (see Appendix D)

3. *Motivation for outdoor activity.* Statements of satisfactions derived from recreational activity were used to determine reasons for outdoor activity. These statements were developed by Meyer (1978)

and were given as part of the questionnaire mentioned above (see Appendix D).

4. *Values related to the outdoors.* An informal interview procedure was used to determine some of the underlying values that influence outdoor activities and behaviour. Specific questions about outdoor values were asked of all subjects (see Appendix F).

5. *Behavioural patterns in the outdoors.* The behaviour of subjects while they were involved in outdoor activities were recorded and analyzed using participant observation techniques (see Appendix G).

Delimitations

The following delimitations were in effect for this study

1. The study was restricted to members of the Victoria branch of the Sierra Club and the Victoria Fish and Game Club.

2. The study was restricted to members of the clubs who were 16 years or older and who had participated at least once in the previous 12 months in either hunting or fishing for members of the Fish and Game Club and hiking, boating, or camping for members of the Sierra Club

3. The study was restricted to paid members of the respective clubs

Limitations

The following limitations occurred in this study

1. The study was limited by the ability of the observer to

accurately and reliably record information from the test instruments, particularly the participant observation measures.

2. The internal validity of the study was limited by the appropriateness of the test instruments and the willingness of subjects to give unbiased responses.

3. The external validity of the study was limited by the restrictions listed under delimitations.

Definition of Terms

Attitude "is a learned predisposition to respond to an object or class of objects in a consistently favourable or unfavourable way" (Fishbein, 1967, p. 53).

Fishing Activity whose primary extrinsic purpose is the catching of fish in either ocean, lake, or stream.

Hunting Activity whose primary extrinsic purpose is the stalking and killing of some animal.

Motivation Involves the incentives or inducements both external and internal, involved in the selection, intensity, and persistence of behaviour (adapted from Birch & Veroff, 1966).

New wilderness ethic no trace camping. Stoves are used instead of fires and tents instead of shelters made on location. An emphasis is placed on leaving the wilderness site exactly as it was found.

Old wilderness ethic Fires are allowed as is the cutting of trees for other uses by the camper. More emphasis is placed on

man's rights in the wilderness

Outdoor recreation consists of voluntary participation during leisure time in activities or experiences that make use of the features of the natural world such as wildlife, hills, rivers, wind, etc. Acts directed against society or that retard the individual's development are not considered recreative experiences and are not components of outdoor recreation (adapted from Jensen, 1977).

Value standard for judging the rightness, wrongness, and worth of certain actions.

Collection of Data

Pilot project. The questionnaire was pretested for comprehension using 13 adult students enrolled in a summer outdoor education class as subjects. There were six females and seven males in the group, with seven of them having been involved in either fishing or hunting during the previous 12 months. All completed the questionnaire within 15 minutes and reported no difficulty in understanding either the wording or procedure required.

Initial contact with clubs. The president or next ranking available executive of each organization was approached by phone and told of the experimenter's interest in studying the characteristics, attitudes, and behaviour of members of outdoor related groups. The executive was asked for permission to contact members of his/her organization as possible subjects for the study. The initial phase

of the contact was uniform for both groups (see Appendix A), but from that point on modifications were made depending on the questions asked. No attempt was made to hide the purpose of the study and in each case an offer was made to verbally report the results of the study in a general manner to members of the organization.

Administration of the questionnaire. Subjects selected from membership lists were contacted by phone and in a uniform manner told of the nature of the experimenter's interests (see Appendix B). A mutually convenient time was found for the experimenter to administer the questionnaire and to conduct the interview discussed below.

The introduction and explanation of the questionnaire was uniform in each case (see Appendix C) and any questions were answered for all subjects. The questionnaire was always administered before the interview was conducted.

Interview. After the questionnaire was completed and the subject indicated his/her willingness to proceed, a tape recorder was placed in front of the experimenter with the mike pointed towards the subject and the interview commenced. All interviews were informal and lasted a maximum of 45 minutes. During the course of the interview specific questions were asked (see Appendix E). No particular order was maintained in questions with an attempt being made to introduce them in as natural a manner as possible.

During the interview the subject was asked to complete a second questionnaire (see Appendix F). Comments made during completion of this questionnaire were discussed and recorded.

Participant observation. After the interview subjects were asked about their anticipated involvement in outdoor activity during the following three months. Subjects who indicated that they would be involved in some outdoor pursuit were asked if they would be willing to allow the experimenter to accompany them for the purpose of obtaining an indication of their behavioural patterns in the outdoors. Two subjects for each group were chosen from those who indicated that they would be involved in outdoor activity, did not mind the experimenter accompanying them, and whose activity occurred at a time available to the experimenter.

Outdoor behaviour was observed for five minutes every hour. Possible activities were precoded by a letter and a strength or degree rating scale used (see Appendix G). During the five minutes an effort was made to record each separate activity on a portable tape recorder using the code word for the activity and the appropriate number for the degree to which it occurred. Unusual activities not fitting the code or in addition to the information that could be carried by the code were recorded by description.

The nature and duration of the trip, type of terrain, weather conditions, and any unusual situations were recorded as they occurred or at the end of the trip depending on which seemed appropriate.

Data Analysis

The following statistical techniques were used to analyze the data

1. *Subject characteristics.* Hypothesis No. 1, that there would be no significant differences between members of the Sierra Club and members of the Fish and Game Club was tested using the chi-square test of independence and the t -test. Responses to some aspects of this section of the questionnaire did not lend themselves to quantitative analysis and as a consequence are reported in a descriptive manner.

2. *Motivation.* Hypothesis No. 2, that there would be no significant difference in motivation between members of the two organizations was tested by factor analyzing the responses for both organizations and then using a t -test to compare responses between the two groups for each factor.

3. *Attitudes.* Hypothesis No. 3, that there would be no significant difference in attitudes between members of the two organizations was tested using a t -test. In addition, results of each of the seven factors isolated by Hendee et al. (1968), in their factor analysis of 1,348 questionnaires, were compared between the two groups using a t -test.

4. *Values.* Hypothesis No. 4, that there would be no significant difference in values related to the outdoors, was tested by first separating each subject's answers into those which showed security

or insecurity in the wilderness and new or old wilderness ethic approach to camping. The scores obtained by having the subject rate the strength of his/her feeling for each question were then added together for each of the four categories namely security, insecurity and new ethic, old ethic and were compared between the two groups using a t-test.

5. *Outdoor behaviour.* Hypothesis No. 5, that there would be no significant difference in common outdoor behaviour between the two groups was tested by comparing both positive activity and negative activity scores between the two groups using a t-test. These scores were obtained by adding the intensity ratings of all negative activities and all positive activities recorded during the trip and dividing these two scores by the number of hours in the trip to obtain per hour values that could then be compared between the two groups.

6. *Correlations.* Correlations between attitudes and motivation, attitudes and values, and motivation and values were determined by calculating Pearson Product-Moment Correlation Coefficients.

7. *Description.* Interviews and participant observations yielded critical results that could be statistically analyzed. This material is reported qualitatively.

- CHAPTER IV

Results and Discussion

Introduction

The purposes of this study were to analyze the differences in characteristics, motivation, attitudes, and values related to the outdoors between members of the Victoria Fish and Game Club and the Victoria Chapter of the Sierra Club of Canada. This chapter presents the results and analysis for each of the five hypotheses listed in Chapter 1

Results

Hypothesis No. 1. There is no significant difference in demographic characteristics between members of the Sierra Club and members of the Fish and Game Club.

Demographic and other related characteristics of the two organizations were analyzed using chi-square tests of independence and t-tests. A summary of the significant findings is presented in Tables 2 to 11.

Table 2

Education

	High School or Less	College Graduation or Some College	Postgraduate Work
Fish and Game	11	9	0
Sierra	1	9	10

Chi-square = 18.33; df = 2, p = 0.0001

Members of the Sierra Club had significantly more education than members of the Fish and Game Club. Both clubs had the same number who had been to college. The difference occurred in the higher number of Fish and Game Club members who had high school only or less as opposed to the higher number of the Sierra Club members who had done postgraduate work

Table 3

Area Raised

	100,000+	10,000- 99,999	1,000- 9,999	Rural
Fish and Game	6	11	0	3
Sierra	12	2	2	4

Chi-square = 10.37, df = 3, p = 0.0156

Sierra Club members were raised in urban areas with populations over 100,000 significantly more often than members of the Fish and Game Club. The Fish and Game Club members tended to be raised in smaller urban centres with populations in the 10,000 to 99,999 range. Sierra Club members were also more likely to be born in larger urban centres but in the case of location of birth, the difference between the two organizations did not reach $p = 0.05$, the significance level chosen for this study

Table 4

Blishen's Occupational Code

	Mean	Standard Deviation	<u>t</u> -value	<u>df</u>	<u>p</u>
Fish and Game	42.74	14.71	-6.07	38	0 0000
Sierra	66.55	9.58			

Sierra Club members had a significantly higher occupational code than members of the Fish and Game Club. Blishen's Occupational Code reflects prestige, income levels, and educational requirements of a particular job. There was, however, no significant difference in income between the two groups.

Table 5

First Outdoor Activity

	Hunting	Fishing	Camping	Hiking	Other
Fish and Game	3	7	7	3	0
Sierra	2	2	3	12	1

chi-square = 11.02, df = 5, p = 0.0509

While the difference exceeded the 0.05 level of significance, 50 per cent of the Fish and Game Club members were involved in hunting and fishing as their first activity as opposed to 20 per cent for members of the Sierra Club where 75 per cent of the members were first involved in hiking or overnight camping.

Table 6

Favourite Activity

	Hunting	Fishing	Camping	Hiking	Other
Fish and Game	10	4	1	2	3
Sierra	1	0	2	15	2

chi-square = 24.06, df = 7, p = 0.0011

The favourite activities for members of the Fish and Game Club were likely to be hunting and fishing as opposed to day hiking for members of the Sierra Club.

Virtually identical responses were given when subjects were asked what outdoor activities they would be doing in the next three months. Members of both groups would most likely be doing their favourite activity.

Table 7
Money Invested in Outdoor Equipment

	Mean	Standard Deviation	<u>t</u> -value	<u>df</u>	<u>p</u>
Fish and Game	\$22,000	\$18,152.14	3.48	38	0.001
Sierra	\$ 6,380	\$ 8,633.45			

Members of the Fish and Game Club have significantly more money invested in outdoor equipment. Most of this was made up of hunting and fishing equipment and trucks specifically bought for outdoor recreation

Table 8

Money Spent Per Year--Other Than Capital Costs

	Mean	Standard Deviation	<u>t</u> -value	<u>df</u>	<u>p</u>
Fish and Game	\$1,635	\$1,342.14			
Sierra	\$ 572	\$ 674.63	3.16	38	0.003

Members of the Fish and Game Club also spend more money per year on outdoor recreation, in addition to their capital expenses. These extra costs would be for bullets, licences, gas, and other supplies that would be used up within the year.

Responses from Sierra Club members to questions about money invested and money spent per year produced data that was positively skewed. For instance, only four of the Sierra Club members had more than \$10,000 invested in outdoor equipment while 11 had \$2,000 or less. This skewed response led to high standard deviations in relation to the means. However, removing the top four scores would not have produced a noticeable statistical adjustment as the differences between the two organizations were already highly significant.

Data from the Fish and Game Club was more normally distributed.

Table 9

Reason for Club Membership

	Support Goals	Facilities	Family Belongs
Fish and Game	7	13	0
Sierra	19	0	1

chi-square = 19.54, df = 2, p = 0.0001

Members of the Sierra Club belonged to their club to support its goals while members of the Fish and Game Club tended to belong to that organization because of the facilities available, such as a shooting range.

Table 10

Response to Experimenter Accompanying
Subject on Outdoor Trip

	Yes	No
Fish and Game	17	3
Sierra	7	12

chi-square = 19.54, df = 2, p = 0.0001

Significantly more members of the Fish and Game Club were willing to have the experimenter accompany them on their outdoor trips

Hypothesis No 2. There is no significant difference in motivation related to outdoor activity between members of the Sierra Club and members of the Fish and Game Club.

Responses to the motivation questionnaire were scored by first adding +3 to all scores so that they would all be positive. Responses from both clubs were then factor analyzed (see Appendix H for eigenvalues).

The first five factors were rotated orthogonally using a Varimax rotation. A complete factor matrix for the five factors is given in Appendix I. Using this factor analysis, each motivation variable was assigned to the factor in which it showed the highest loading. Components of the five factors are listed in Appendix J.

Responses by members of the two clubs were then compared by adding the scores for each item in a factor and comparing the results using a t-test.

Only Factor C--Mental Reward--showed any significant difference between the two clubs.

Table 11

Motivation Factor C--Mental Reward

	Mean	Standard Deviation	<u>t</u> -value	<u>df</u>	<u>p</u>
Fish and Game	12.35	2.11	2.33	38	0.026
Sierra	10.65	2.50			

Members of the Fish and Game Club scored Factor C--Mental Reward-- as a higher motivating factor in their outdoor activity than did members of the Sierra Club.

Responses to each item in the motivation questionnaire were also tested using a t-test. Three of the 18 items produced a significant response.

Table 12
Motivation Items

Item	Fish and Game Mean	Sierra Mean	<u>t</u> -value	<u>p</u>
Being in a quiet state	4.20	4.65	-2.08	0.045
Searching for excitement	3.95	3.20	2.31	0.027
Self-Achievement	4.25	3.55	2.09	0.044

"Being in a quiet state" was more important for members of the Sierra Club than for members of the Fish and Game Club, while "searching for excitement" and "self-achievement" were more important for members of the Fish and Game Club. The last two items are components of Factor C, which was the only factor to show a significant difference between the two groups. The fact that the two components of this factor were two of the three individual items that also showed a significant difference tends to strengthen the validity of the factor analysis. In addition, the other component of Factor C, self-development, also showed a

higher response for members of the Fish and Game Club, although p exceeded 0.50, the probability level used as a maximum for this study.

Caution The assignment of motivation items to factors, described on page 42, was somewhat arbitrary in that items were assigned to those factors for which they had the highest loading even though each item also had a loading in the other four factors. This loading was ignored in the analysis of the differences between the two groups. In addition, within the factor each item did not have the same loading but in the calculations it was treated as if it did. The fact that individual analysis of the motivational items showed significant differences in two of the three items found in Factor C--mental reward--, which the analysis of factors showed to be the only one producing a significant difference, indicates that there was validity in the manner in which items were assigned to factors.

Hypothesis No. 3. There is no significant difference in attitudes related to the outdoors between members of the Sierra Club and members of the Fish and Game Club.

Responses to the attitude questionnaire were scored by first adding +3 to all scores so that they would all be positive. Responses to each item were then arranged so that scores increased in the direction of wilderness-purist. For the direction of response of the wilderness-purist and the items in each of the factors discussed below see Appendix K.

Table 13
Total Wilderness-Purist Scores

	Mean	Standard Deviation	<u>t</u> -value	<u>df</u>	<u>p</u>
Fish and Game	221.85	15.397	-2.92	38	0.006
Sierra	235.40	13.877			

Members of the Sierra Club had a significantly higher total wilderness-purist score than members of the Fish and Game Club.

Table 14
Attitudinal Factors
(see Appendix K)

Item	Fish and Game Mean	Sierra Mean	<u>t</u> -value	<u>p</u>
Antiartificialism	38.10	44.05	-2.22	0.032
Humility	14.05	17.15	-2.90	0.006
Outdoorsmanship	19.65	21.85	-2.16	0.037

Three of the seven factors isolated by Hendee et al. (1968) showed significant differences between the two groups, with members of the Sierra Club having higher scores on all three factors.

The same caution needs to be exercised in the interpretation of the factor scores for attitude as was for motivation. Hendee et al.

(1968) also assigned all of the value of a single item to a factor even though it also had weight with other factors.

Table 15
Individual Items in Attitude Questionnaire

Item	Fish and Game Mean	Sierra Mean	t-value	p
camping	4.10	4.70	-2.39	0.022
hiking	4.05	4.80	-3.43	0.001
alpine meadows	4.40	4.90	-2.55	0.015
virgin forests	4.25	4.70	-2.07	0.045
purchasing souvenirs	3.40	4.05	-2.06	0.046
power boating	2.55	3.85	-3.60	0.001
adventure	4.50	3.90	2.11	0.042
chance to boast	3.15	4.25	-3.56	0.001

Of the eight individual items that showed a significant difference between the two groups, the Fish and Game Club obtained higher scores for only one item, "adventure". Thus, in total wilderness-purist score, factor scores, and individual item scores, there was only one item where the fish and Game Club members scored higher than the Sierra Club members, namely "adventure".

Hypothesis No. 4. There is no significant difference in values related to the outdoors between members of the Sierra Club and members of the Fish and Game Club

Scores obtained by having subjects rate the strength of their feeling for each question (see Appendix F) were added together for each of the four categories namely security, insecurity, and new camping ethic, old camping ethic, and the scores were then compared between the two groups using a t-test. For an analysis of the components of each factor see Appendix L.

There was no significant difference between the two groups with regard to security, insecurity. Results for new camping ethic, old camping ethic are presented below (see Table 16).

Table 16

New, Old Camping Ethic

Item	Fish and Game Mean	Sierra Mean	<u>t</u> -value	<u>p</u>
New Camping Ethic	7.00	9.15	-2.42	0.021
Old Camping Ethic	3.15	1.17	2.55	0.015

Fish and Game Club members were significantly more likely to support an Old Camping Ethic when their responses were compared to those of the Sierra Club members. Conversely, Sierra Club members were more likely to support the New Camping Ethic.

When the responses from just the Fish and Game Club members were examined, support for the New Camping Ethic was found to be higher than support for the Old Camping Ethic. A t-test was performed to

analyze the difference in support of the two ethics for Fish and Game Club members alone (see Table 17).

Table 17

New vs Old Camping Ethic--Fish and Game Club

Item	Mean	Standard Deviation	t-value	df	p
New Camping Ethic	7.00	2.596	5.27	18	0.001
Old Camping Ethic	3.15	1.981			

When the Fish and Game Club members alone were considered, they were significantly more likely to support a New Camping Ethic. Thus, members of both groups supported a New Camping Ethic but support was significantly greater among members of the Sierra Club than members of the Fish and Game Club.

Hypothesis No. 5. There is no significant difference in outdoor behaviour, as measured by participant observation, between members of the Sierra Club and members of the Fish and Game Club for activities that are common to both groups.

No significant differences were found between the two groups in outdoor behaviour. The sample size of two members from each group was too small for statistical significance. New insights were obtained into the use of participant observation in an outdoor situation and these are discussed later.

Correlations. If a model of the individual, such as that developed by Hodgkinson (1978), has any potential to provide a theoretical framework for outdoor recreation research, then there should be some degree of correlation between the various aspects of the individual that the model discusses. In Hodgkinson's case, correlation would be expected between motives, values, and attitudes. To test this Pearson Product-Moment Correlation Coefficients were calculated to determine the level of correlation between these items and between each of them and behaviour (see Appendix M for correlation matrix).

There was a significant correlation between total attitude scores and motivation factor A--Physical and Emotional Health--and 11 significant correlations between attitude and motivation factors. Attitude factor I--Spartanism--in particular produced significant correlations with four of the five motivation factors.

There was also a significant correlation between attitude factor VII--Escapism--and one of the four values--Security--but no significant correlations were found between motivation factors and values

One significant correlation was obtained between attitude factor IV--Humility--and Positive Activities. There were no other significant correlations between behaviour and either attitudes, motivation, or values. Indeed even the one correlation between attitude and behaviour must be viewed with caution because a significant number of Sierra Club members did not want the experimenter to accompany them on an outdoor trip. This, combined with the logistical problems

involved in selecting subjects for field trips, meant that the samples chosen for participant observation were not random. As a consequence, a correlation with behaviour must be viewed as an indication rather than a statistically valid result.

Description. Some of the findings of both interviews and participant observation must be reported in a qualitative rather than a quantitative manner.

1. Motivation. Much of the material obtained in the interviews and field trips supported responses given to motivation questionnaire items. However, 10 subjects mentioned spiritual factors as being the main reason for their outdoor activity.

2. Values. In completing the values questionnaire, subject comments were recorded. One item, "If you saw someone in the wilderness doing something he shouldn't, would you say something to him?", elicited a negative responses from most subjects. They were afraid that the person might turn on them. This would be particularly true if they saw the person was carrying a gun.

3. Behaviour In three of the four field trips family members accompanied the subject. In the fourth trip this did not happen because of a last minute change in plans. All trips took place within 70 kilometres of Victoria, with three of them taking place within 30 kilometres of the city.

Heavily logged areas were used for one trip of each of the two clubs. No mention was made of the slash piled around or of the stark landscape. Both groups used the logging roads to accomplish their goals

In each case, however, the view in the distance was fabulous.

The major difference in trips with the two clubs was that subjects from the Fish and Game Club were trying to catch some game animal, while this was not the case with the Sierra Club members. Movement with the Fish and Game Club members tended to be in a circular direction and did not have a particular goal in terms of location. On the other hand, Sierra Club members tended to hike in a linear direction with a specific goal. Because members of the Fish and Game Club were looking for a game animal, they spent much more time examining the landscape than did members of the Sierra Club.

No game was caught on either of the Fish and Game Club trips. No one seemed to be the least upset about this. In both cases the subject said his main purpose in the activity was outdoor recreation rather than obtaining game. These statements were echoed by all members of the Fish and Game Club who were involved in hunting or fishing. "I hunt because I feel peaceful out there". "I hunt because of the naturalness and joy of it". "The thrill of hunting is actually seeing the game after hours and hours of hunting. It is not the killing. That is over in a second."

The fact that the animal is actually killed rather than just observed and that a great deal of money and attention is given to guns, ammunition, and fishing gear, indicates that the killing of the game must also play a part in the hunting and fishing experience.

Discussion

Characteristics. Members of the Sierra Club were significantly more likely to have done postgraduate work than members of the Fish and Game Club, while members of the Fish and Game Club were more likely to have completed only high school or less. Even after completing their schooling, members of the Sierra Club were more likely to be associated with the university. These results support Devall's (1970) findings that members of the Sierra Club tended to be well-educated. Indeed in the present study 95 per cent of the Sierra Club members had been to college.

Members of the Sierra Club were mostly raised in urban areas with populations over 100,000. This supports the findings of Hendee et al (1968), that those with high wilderness-purist scores were raised in urban areas. Members of the Fish and Game Club were more likely to be raised in smaller urban areas with populations of 10,000 to 99,999. This is contrary to the ORRC (1962) findings that hunting and fishing were mostly associated with those raised in rural areas. The difference in the two findings may be due to the character of the west coast and of Victoria in particular, a factor discussed later.

Blishen's Occupational Code was significantly higher for members of the Sierra Club. Again this would tend to support Devall's (1970) findings that only five per cent of the Sierra Club members came from lower status jobs.

Hunting and fishing were the favourite activities for members of the Fish and Game Club. Activities learned as a child tended to remain as favourite activities later in life. This could have important implications in terms of future outdoor recreation planning.

When subjects were asked what activity they would be doing in the next three months, their responses were virtually identical to those listed as favourite activities. In the Victoria area, outdoor people seem to be able to engage in their favourite activity, perhaps because of the closeness of recreation areas to the city.

As might be expected, members of the Fish and Game Club were more likely to be involved in hunting and fishing than members of the Sierra Club. Only one member of the Sierra Club sample was an active hunter, even though the Sierra Club does not officially frown on hunting.

Members of the Fish and Game Club have more money invested in outdoor equipment and spend more per year in outdoor pursuits than do members of the Sierra Club. The nature of the Fish and Game Club members' activities require more equipment in terms of guns and fishing gear than do those pursued by members of the Sierra Club. In addition, many of the members of the Fish and Game Club have trucks that were specifically bought for outdoor recreation use. The difference in the amount of money spent may have important implications for the outdoor recreation industry

Ninety-five per cent of the members of the Sierra Club belong to that organization to support its conservation goals while only

35 per cent of the Fish and Game Club members belong to their club for similar reasons. However, the Fish and Game Club has approximately 1,250 members as opposed to approximately 250 members for the Sierra Club, so in absolute terms more people belong to the Fish and Game Club because they support its aims than belong to the Sierra Club in total.

Members of the Fish and Game Club who did not join their club primarily because of its aims were interested in facilities owned by the club such as a shooting range. The fact that the Sierra Club does not have an equivalent type of facility is a confounding factor in any study of reason for membership

Motivation Of the five motivational factors isolated, only one--Mental Reward--showed any significant difference between the two clubs. This is consistent with other studies which have shown that the motivation for outdoor recreation is similar across activities (Hautala-uoma & Brown, 1978, Rossman & Ulehla, 1977). However, the one factor that was significantly different tends to support Meyer's (1978) contention that even though motivations for outdoor recreation may be similar, each activity has a unique motivating factor that makes substituting one activity for another very difficult.

Attitude. Members of the Sierra Club had significantly higher wilderness-purist scores than members of the Fish and Game Club. This is in agreement with the findings of Hendee et al. (1968), that wilderness-purist scores are higher among the better educated and those who work at higher status jobs. Three of the seven factors

isolated by Hendee et al. also showed significantly higher wilderness-purist scores for members of the Sierra Club.

Values. Heberlein (1973) felt that the attitude scores obtained on the scale developed by Hendee et al. (1968) were more a reflection of beliefs about the outdoors than any other factor. He found that people who obtained low wilderness-purist scores thought of the outdoors as an uncomfortable place and did not feel safe there. In this study, however, no significant difference was found between the groups in terms of their feelings of security in the outdoors.

In this study, however, members of the Sierra Club were more likely to support a camping ethic that emphasizes not building fires, cutting of boughs for beds, or disturbing the wilderness for man's benefit than were members of the Fish and Game Club. This is consistent with the higher wilderness-purist scores obtained by members of the Sierra Club. When camping ethic scores were considered for Fish and Game Club members only, it was found that within the Fish and Game Club there was also more support for a "no trace camping" ethic than for an older fire building and tree cutting ethic, although the scores were significantly lower than those of the Sierra Club members.

Correlations. Of a possible 92 correlations between attitudes, motivation, and values, only 13 were found to be significant. While this is slightly more than the five or so that would be expected by chance, the other few correlations could be accounted for by people tending to respond in a similar manner to questionnaires regardless

of the question asked.

The fact that a low number of correlations were obtained indicates that the various questionnaires were not just measuring the same aspect of the individual. At the same time this low level of correlation raises a question as to the consistency of attitudes, motivation, and values within the individual and tends to throw into doubt the value of any model that depends on such consistency.

Behaviour. Participant observation techniques should prove very useful in examining outdoor behaviour. Difficulties encountered with the technique, mostly having to do with logistics, are explored in the next chapter.

CHAPTER V

Conclusions, Relationships to Other Studies and Implications

Conclusions and Relationships to Other Studies

Conclusions to this study are presented as discussions of the five hypotheses listed in the Statement of the Problem in Chapter I. Relationships to other studies and implications for the outdoor recreation field are included as well as recommendations for future research.

Hypothesis No. 1. An analysis of the differences found in the study shows that members of the Sierra Club were more likely to be better educated, have higher status jobs, and be associated with the university than were members of the Fish and Game Club. These results are very similar to Devall's (1970) analysis of the Sierra Club.

Members of the Sierra Club were more likely to be raised in cities with populations over 100,000 while Fish and Game Club members were more likely to be raised in smaller cities with populations in the 10,000 to 99,999 range. A similar situation existed with the area born but the difference was not as pronounced.

Only three members of the Fish and Game Club were born or raised in rural areas or small towns. This is contrary to the ORRC (1962)

findings that hunting and fishing were mostly associated with those born in rural areas or small towns and points to the fact that hunting and fishing should not be considered to be rural activities for this region of Canada but must also be seen as outdoor activities for those born and raised in urban areas.

As might be expected, more members of the Fish and Game Club were involved in hunting and fishing than were members of the Sierra Club. Members of the Fish and Game Club listed hunting and fishing as their favourite activities while members of the Sierra Club chose hiking.

Other studies (ORRC, 1962, Vaux, 1975; White, 1971) have found a negative correlation between outdoor activity and age. No such relationship was found in this study for either group even though people up to the age of 68 were involved. Similarly there was no difference in the amount of time spent in the outdoors when income and education were considered. This is also contrary to the studies listed above. It is interesting to note that there was no difference in income between members of the two clubs even though their occupational codes were significantly different. Other studies have postulated that the increased use of the outdoors by the better educated and high status job holders was a matter of increased disposable income.

Both groups were introduced to the outdoors at an average age of seven, most often by their parents (68%). Most of the current outdoor trips for both groups are with family and friends (88%), for less than three days (88%), with 3.2 people per trip to a destination within

150 kilometres of Victoria. The factor that most limits outdoor recreation for both groups is time (67%) followed by health (15%). Only three people out of the 40 mentioned cost as having any bearing on their outdoor pursuits.

Members of both organizations were introduced to conservation at approximately 16 years of age. However, in this case, friends tended to be the stimulating factor (61%) as opposed to family (32%).

Members of the Fish and Game Club spent more money per year on outdoor pursuits and had more money invested in outdoor equipment. They did not spend more time in the outdoors or travel farther for their outdoor activity. This increased investment was related to the purchase and maintenance of guns, fishing gear, boats, and trucks.

Hypothesis No. 2. Many studies have found similar motivating factors among people taking part in various forms of recreation (Hautaluoma & Brown, 1978, Rossman & Ulehla, 1977). Meyer (1978) has pointed out that while motivation for outdoor activities may be similar, each activity seems to have a unique motivating factor that makes substituting one activity for another very difficult. In this study no significant difference was found in four of the five motivation factors isolated. However, one factor--mental reward (excitement, self-achievement, self-development)--was a significantly higher motivating factor for members of the Fish and Game Club than for members of the Sierra Club. The finding of this unique factor against a background of similar motivating factors would tend to support Meyer's conclusions.

Hypothesis No. 3. Members of the Sierra Club were found to have significantly higher wilderness-purist scores than members of the Fish and Game Club and to exceed Fish and Game Club members on the three attitude factors for which a significant difference was obtained. Sierra Club members had characteristics that Hendee et al. (1968) found to be associated with high wilderness-purist scores, namely being well educated and working at high status jobs. Hendee et al. also found urban upbringing to be another important factor in high wilderness-purist scores but in this study most of the subjects from both groups were raised in urban areas although Sierra Club members did tend to be raised in larger cities. Perhaps the urban-rural variable was not as important in the Victoria area because of the proximity of rural areas and outdoor recreation sites of the city.

Hypothesis No. 4. Heberlein (1973) stated that placement on the Wilderness-Purist Scale was related to beliefs about the comfort and safety of the outdoors. No such relationship was found in this study as members of the Fish and Game Club were no more likely to feel insecure or uncomfortable in the wilderness than members of the Sierra Club. However, members of the Fish and Game Club were more likely to support an older camping ethic that allowed the building of fires, cutting of boughs for beds, and the changing of the wilderness if the change was of benefit to man. This seems to be consistent with their receiving a lower wilderness-purist score. Within the Fish and Game Club itself, members were significantly more likely to support a camping ethic that frowned on these activities

Hypothesis No. 5. No significant difference was found between the two groups with regard to outdoor behaviour. This might be expected as only two members from each group were studied. In any case, reluctance on the part of Sierra Club members to having the experimenter accompany them on outdoor trips plus the selection process by which subjects were chosen for observation renders any statistical conclusions suspect. Despite not being able to use the data in any comparative sense, valuable insights were obtained into the methodology of participant observation in an outdoor setting.

Implications

Confirmation of the findings of Hendee et al. (1968) indicates the value of their attitude scale in the study of outdoor users. The scale could be considerably improved by introducing new terminology for some of the factors.

Finding that members of the Fish and Game Club were born and raised in urban areas is a pronounced change from commonly held beliefs and the conclusions of ORRC (1962), that hunting and fishing are associated with a rural upbringing. If this change is common across Canada, then combined with increases in the sale of hunting and fishing licenses, it tends to negate any expected decline in hunting.

The outdoor people in this study tended to see the first activity they took part in as children as their favourite activity, and in the Victoria area at least, seem to be able to pursue that activity with

their major obstacle being time rather than cost or lack of facilities. They took part in outdoor activities with family and friends for less than three days duration and within 150 kilometres of their urban home. All of these factors have important implications for outdoor recreation planning.

Even though members of the two clubs were involved in quite different outdoor recreation activities, their motivation for taking part was similar. However, one motivation factor--Mental Reward--did produce a significant difference between the two groups. Restricting hunting for instance, with the assumption that the hunter could do other things would deprive the hunter of the ability to satisfy the particular motivating factor or factors that characterize hunting. It might also considerably reduce the amount of money spent on outdoor equipment and in the pursuit of outdoor experiences.

While members of the Fish and Game Club stated that the outdoor experience is the most important part of the hunting or fishing experience for them, the fact that they spend a great deal of money on guns, ammunition, and fishing gear would indicate that killing the animal is also an important part of the experience. If this is the case, substituting activities that emphasize merely seeing the game might not be satisfactory.

Perhaps more importantly for research purposes, this study indicates that a model of the individual, such as that developed by Hodgkinson (1978), may not be useful in providing a framework for a discussion of relationships between attitudes, motivation, values, and

behaviour. Additional models should be developed and explored, models that use a terminology and concepts that reflect the needs of those interested in outdoor recreation research and that take into account the apparent lack of consistency within the individual.

Several areas need to be discussed among those interested in participant observation in an outdoor setting. Classification of behaviours and conditions is particularly important. There needs to be a certain standardization as to the meaning and appropriateness of particular behaviours in given settings. The presence of the observer affects the behaviour of the subject and so techniques, appropriate to outdoor recreation, must be developed to minimize and standardize these effects. More difficult to standardize may be the effects of other members of the group on the behaviour of the subject i.e., the subject may behave differently with different individuals. In addition, the question of observer responsibility on field trips needs to be examined.

Those interested in field observation in the outdoors should be warned that there are many logistical obstacles to overcome. Observation must occur over a sufficient length of time and with enough subjects to make conclusions meaningful. Much of the outdoor recreation occurs on the weekend and if one trip is cancelled for some reason, a week is lost before another trip can be organized

Development of a common vocabulary and uniform experimental procedures are needed to provide a framework for discussions of attitudes, motivation, values, and behaviour in the outdoors. This will then result

in an integrated body of research rather than isolated studies. Only by using this approach can those interested in outdoor recreation research hope to understand the outdoor user and to communicate their findings in some meaningful way to each other.

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APPENDIX A

Initial Contact With Executives of Organizations

Initial contact was made by phone to the President of the club or the next ranking available executive.

"Hello Mr./Mrs. _____
name

My name is John Durkin. I am a graduate student at the University of Victoria. I would like to obtain information about the attitudes and motivation of those interested in the outdoors and was hoping I could contact some of the members of _____.
name of club

The study would involve people completing a confidential questionnaire and taking part in a short interview in their homes.

I will also be contacting members of another organization to collect similar information."

I then gave the other person a chance to speak and continued the conversation from there based on their response to my initial comments.

APPENDIX B

Initial Contact With Subjects

All subjects were contacted in the evening by phone except where indications were given that the subject was only available at some other time.

"Hello Mr./Mrs. _____
name

My name is John Durkin. I am a graduate student at the University of Victoria and am interested in the attitudes and motivation of those participating in outdoor activities. I obtained your name from the membership list of the _____ and would
name of club

like to arrange for a convenient time to interview you and to get you to complete a short questionnaire. Your name will not be used in any aspect of this study."

I then gave the other person a chance to speak and continued the conversation from there based on the response to my initial comments.

APPENDIX C

Introduction of Questionnaire

Questionnaires were given to subjects in their homes or at some other location that was more convenient or comfortable for them. Informal conversation took place until the subject appeared relaxed enough with my presence to commence the questionnaire. The questionnaire was then placed in front of the subject and the following comments and instructions given

"The questionnaire in front of you is part of a study I am doing of people involved in outdoor activity. Please complete the section asking for your name, address, and phone number and leave it attached to the questionnaire. I will remove it as soon as you give me the completed questionnaire. Your name is on a separate sheet so that anyone looking at the questionnaire forms will not be able to tell who completed them.

Please answer all the questions. There are no correct answers so just give your own reaction.

Do you have any questions? (Hesitation). If you have any questions while completing the questionnaire, please ask."

APPENDIX D

*Questionnaire Concerning Characteristics,
Attitudes, and Motivation*

Number _____
Name _____ Phone No. _____
Address _____
_____ Postal Code _____

(Characteristics)

Number _____

Please circle the category which best indicates your response

Age _____ Marital Status _____ Number of Children _____

Education: High School or Less College Graduation or some College Postgraduation WorkWhere Born Urban Area Rural Area

100,000+

10,000-
99,9991,000-
9,999Where Raised: Urban Area Rural Area

100,000+

10,000-
99,9991,000-
9,999Income: Under \$3,000 3,000-5,999 6,000-9,999 10,000-14,999 15,000-24,999

25,000+

Occupation _____

Amount of time involved in outdoor recreation during past 12 months _____ days

Number of friends who are also outdoors people most few none

Other outdoor and/or conservation clubs to which you belong

Whom do you most often visit the outdoors with alone family friends

How old were you on your first outdoor trip? _____

Who introduced you to the outdoors? father mother relatives friend

What activity did you first take part in? _____

Are you now an active hunter (at least once in past 12 months)? _____

If you hunt, how old were you when you started? _____

Who introduced you to hunting? father mother relatives friends

If you have stopped hunting, how old were you when you stopped? _____

Why did you stop? _____

Are you now actively involved in fishing? (once in past 12 months) _____

If you fish, how old were you when you started? _____

Who introduced you to fishing? father mother relatives friends

If you have stopped fishing, how old were you when you stopped? _____

Why did you stop? _____

How old were you when you first became interested in conservation? _____

Who first influenced you? father mother relatives friends

How long is your usual outdoor trip? 1 day overnight 2-4 days longer

How many people are usually in your outdoor trips? _____

What is your favourite outdoor recreation activity? _____

Any factors that limit your involvement in that activity? _____

(Wildernist-Urbanist Scale)

For each item in the following list of possible features, activities or benefits associated with wilderness-type recreation, circle one number that best expresses your attitude--how positive or how negative you feel toward having that feature, participating in that activity or receiving that alleged benefit from such experience.

Questionnaire Item	Strongly Dislike		Neutral	Strongly Favour	
Camping (backpacking)	-2	-1	0	1	2
Tranquility	-2	-1	0	1	2
Sleeping outdoors	-2	-1	0	1	2
Hiking	-2	-1	0	1	2
Solitude	-2	-1	0	1	2
Enjoyment of nature	-2	-1	0	1	2
Awareness of beauty	-2	-1	0	1	2
Alpine meadows	-2	-1	0	1	2
Absence of manmade features	-2	-1	0	1	2
Drinking mountain water	-2	-1	0	1	2
Virgin forest	-2	-1	0	1	2
Lakes (natural)	-2	-1	0	1	2
Timberline vegetation	-2	-1	0	1	2
Vast area and enormous vistas	-2	-1	0	1	2
Physical exercise	-2	-1	0	1	2
Rugged topography	-2	-1	0	1	2
Native wild animals	-2	-1	0	1	2
Looking at scenery	-2	-1	0	1	2
Emotional satisfaction	-2	-1	0	1	2
Cutting Christmas tree	-2	-1	0	1	2
Camps for organizations	-2	-1	0	1	2
Gravel roads	-2	-1	0	1	2
Private cottages	-2	-1	0	1	2
Purchasing souvenirs	-2	-1	0	1	2
Camping (with car)	-2	-1	0	1	2
Equipped bathing beaches	-2	-1	0	1	2
Automobile touring	-2	-1	0	1	2
Powerboating	-2	-1	0	1	2
Campsites with plumbing	-2	-1	0	1	2
Developed resort facilities	-2	-1	0	1	2

Questionnaire Item	Strongly Dislike		Neutral	Strongly Favour	
Unchanged natural coastlines	-2	-1	0	1	2
Reservoirs (manmade)	-2	-1	0	1	2
Waterfalls and rapids	-2	-1	0	1	2
Campsites with outhouses	-2	-1	0	1	2
Remoteness from cities	-2	-1	0	1	2
Absence of people	-2	-1	0	1	2
Canoeing	-2	-1	0	1	2
Picking wildflowers	-2	-1	0	1	2
Taking pictures	-2	-1	0	1	2
Mountain climbing	-2	-1	0	1	2
Hearing naturalist talks	-2	-1	0	1	2
Talking with tourists	-2	-1	0	1	2
Viewing naturalist exhibits	-2	-1	0	1	2
Breathing fresh air	-2	-1	0	1	2
Getting physically tired	-2	-1	0	1	2
Studying pioneer history	-2	-1	0	1	2
Low-cost outdoor recreation	-2	-1	0	1	2
Learn to lead simple life	-2	-1	0	1	2
Chance to acquire knowledge	-2	-1	0	1	2
Chance to stumble onto wealth	-2	-1	0	1	2
Adventure	-2	-1	0	1	2
Sense of personal importance	-2	-1	0	1	2
Improve physical spirit	-2	-1	0	1	2
Recapture pioneer spirit	-2	-1	0	1	2
Relieve tensions	-2	-1	0	1	2
Attain new perspectives	-2	-1	0	1	2
Chance to boast	-2	-1	0	1	2
Sense of humility	-2	-1	0	1	2
Family solidarity	-2	-1	0	1	2
Chance for noble thoughts	-2	-1	0	1	2

(Motivation)

Listed below are some of the key satisfactions that may explain why you become involved in outdoor recreation. There may be some important satisfactions that we have not included. If so, please write them in the spaces provided.

Please circle one number that best expresses the value of each satisfaction for you.

	Very Negative		Neutral	Very Positive	
A. Change in experience (real or imaginary?)	-2	-1	0	1	2
B. Fulfillment of obligations to family, friends or others	-2	-1	0	1	2
C. Recognition	-2	-1	0	1	2
D. Fun	-2	-1	0	1	2
E. Exercise	-2	-1	0	1	2
F. Being in a quiet state	-2	-1	0	1	2
G. Searching for excitement	-2	-1	0	1	2
H. Being with people	-2	-1	0	1	2
I. Competition	-2	-1	0	1	2
J. Self-achievement	-2	-1	0	1	2
K. Physical health	-2	-1	0	1	2
L. Doing something different	-2	-1	0	1	2
M. Self-development	-2	-1	0	1	2
N. Getting rid of tensions and frustrations	-2	-1	0	1	2
O. Establishing a basis for recollection and discussions at a later date	-2	-1	0	1	2

	Very Negative		Neutral	Very Positive	
P. Close contact with nature	-2	-1	0	1	2
Q. Friendship	-2	-1	0	1	2
R. Being with the family	-2	-1	0	1	2
S.					
T.					

APPENDIX E

Procedure for Interview

(Interview)

After the questionnaire was completed and the subject indicated his/her willingness to proceed, a tape recorder was placed in front of the experimenter with the mike pointed toward the subject and the interview commenced. All interviews were informal and lasted a maximum of 45 minutes. Confidentiality was assured to the subject and emphasized by recording the subject's number rather than name to introduce the tape.

The interview centred on each person's involvement in and feelings about the outdoors. During the course of the interview subjects were asked the following specific questions

1. What kinds of outdoor activities are you involved in during the year?
2. What would your typical trip look like?
3. Why is outdoor activity important to you?
4. Why do you belong to (name of organization)?
5. How much money do you have invested in outdoor equipment?
6. How much would you spend in a year other than capital costs?

After the above questions had been answered a second questionnaire was given to the subject (see Appendix F). The tape recorder was kept running and the subject was encouraged to make any comments

he/she thought appropriate.

The interview was terminated when the subject showed signs of wishing to terminate the conversation or when the experimenter determined that he had sufficient data.

APPENDIX F

Interview Questionnaire

(Values Questionnaire)

Questionnaire # _____

			Neutral	Mild Feelings	Medium Feelings	Strong Feelings
Do you feel the wilderness has any value if man cannot get to it?	Y	N	0	1	2	3
Do you feel the wilderness should be altered if the alteration benefits man?	Y	N	0	1	2	3
Are you ever afraid in the wilderness?	Y	N	0	1	2	3
Would you sooner visit the wilderness alone or with a friend?	Y	N	0	1	2	3
Do you feel wild animals are a danger to wilderness users?	Y	N	0	1	2	3
Do you find the wilderness to be an uncomfortable place?	Y	N	0	1	2	3
Do you feel secure in the wilderness?	Y	N	0	1	2	3
Does the wilderness make you feel powerless and vulnerable?	Y	N	0	1	2	3
Should people be able to camp wherever they please in the wilderness?	Y	N	0	1	2	3
In the wilderness, should a person be free to cut boughs for his bed or wood for his fire?	Y	N	0	1	2	3
If you saw a person in the wilderness doing something he shouldn't, would you say something to him?	Y	N	0	1	2	3
Do you feel the more luxuries a party can bring, the better the camping trip?	Y	N	0	1	2	3
Do you plan to take part in any outdoor activity during the next three months? Yes No						
What will you be doing? _____						

Would you mind if I came along to see what you do? Yes No

APPENDIX G

Observation of Outdoor Behaviour

(Participant Observation)

To enable the data collected during field observation to be analyzed, a classification system was used with the following codes

N	. .	Destruction of environment	A
N	. . .	Pollution of land or water	B
P	. . .	Observation of nature	C
P	. . .	Activity to preserve environment	D
N	. . .	Poor technique	E
P	. . .	Good technique	F
P	. . .	Cooperation	G
N	. . .	Non-cooperation	H
N	. .	Dangerous activity	I
P	. .	Safety procedures	J

(N refers to negative behaviours, P refers to positive behaviours).

The strength of each activity was rated on the following scale.

Weak	Medium	Strong
1	2	3

Thus a very dangerous activity would be coded I3.

Activities that appeared at the time to be important but that did not fit the classification system were recorded by description for later assessment.

APPENDIX H

Factor Eigenvalues

<u>Factor</u>	<u>Eigenvalue</u>
1	4.118
2	2.656
3	1.955
4	1.689
5	1.417
6	1.020
7	0.991
8	0.763
9	0.666
10	0.557
11	0.469
12	0.354
13	0.346
14	0.292
15	0.234
16	0.223
17	0.137
18	0.114

APPENDIX I

Motivation Factor Matrix

Factor Analysis of Motivation

Varimax

Communalities		1	2	3	4	5
1	0.773	0.044	-0.275	0.063	0.107	0.824
2	0.630	0.028	0.719	0.109	0.183	-0.258
3	0.742	0.011	0.765	0.386	0.042	-0.075
4	0.449	0.447	0.140	0.430	0.094	0.189
5	0.755	0.845	0.038	-0.005	0.013	-0.198
6	0.429	0.533	-0.320	0.146	0.043	0.139
7	0.590	-0.035	0.193	0.710	-0.222	0.059
8	0.527	-0.099	0.496	-0.047	0.446	0.271
9	0.832	0.065	0.859	0.156	-0.031	0.253
10	0.786	-0.003	0.164	0.836	0.221	-0.107
11	0.694	0.812	0.146	0.068	-0.064	0.061
12	0.797	0.188	0.273	0.062	-0.103	0.820
13	0.770	0.272	0.106	0.723	0.258	0.309
14	0.714	0.149	-0.077	0.051	0.826	0.028
15	0.464	-0.045	0.051	0.400	0.335	0.432
16	0.466	0.575	-0.088	-0.025	0.223	0.276
17	0.752	0.055	0.257	0.172	0.809	-0.009
18	0.660	0.530	0.145	-0.412	0.432	0.033
	11.834	2.624	2.556	2.496	2.121	2.036
Percent of Common Variance						
	100.000	22.175	21.598	21.094	17.927	17.205
Percent of Total Variance						
	65.743	14.579	14.199	13.868	11.786	11.311

APPENDIX J

Components of Five Motivation Factors

Factor A--Physical and Emotional Health

Fun

Exercise

Quiet state

Physical health

Close contact with nature

Being with family

Factor B--Social

Obligations to family, friends, or others

Recognition

Being with people

Competition

Factor C--Mental Reward

Excitement

Self-achievement

Self-development

Factor D--Anxiety Reduction

Getting rid of tensions and frustrations

Friendship

Factor E--Stimulation

Change in experience

Something different

Establishing a basis for recollection and discussion at a later date

APPENDIX K

*Components of Attitude Factors and Direction
of Responses of Wilderness-Purist*

Factor I. Spartanism--eigenvalue 7.35

(Positive response by wilderness-purist)

Improve physical health
 Adventure
 Recapture pioneer spirit
 Physical exercise
 Chance to acquire knowledge
 Learn to lead simple life
 Relieve tensions
 Attain new perspectives
 Breathing fresh air
 Emotional satisfaction
 Getting physically tired

Factor II. Antiartificialism--eigenvalue 3.39

(Negative response by wilderness-purist)

Campsites with plumbing
 Equipped bathing beaches
 Developed resort facilities
 Gravel roads
 Camping with car
 Automobile touring
 Camps for organizations
 Private cottages
 Powerboating
 Reservoirs (manmade)
 Campsites with outhouses
 Purchasing souvenirs
 Cutting Christmas trees
 Viewing naturalist exhibits

Factor III. Primevalism--eigenvalue 3.05

(Positive response by wilderness-purist)

Waterfalls and rapids

Alpine meadows

Timberline vegetation

Lakes (natural)

Virgin forests

Rugged topography

Unchanged natural coastlines

Native wild animals

Vast areas and enormous vistas

Factor IV. Humility--eigenvalue 2.23

(Negative response by wilderness-purist)

Chance to boast

Sense of personal importance

Chance to stumble onto wealth

Picking wild flowers

Factor V. Outdoorsmanship--eigenvalue 2.07

(Positive response by wilderness-purist)

Camping (backpacking)

Hiking

Mountain climbing

Canoeing

Sleeping outdoors

Factor VI. Aversion to Social Interaction--eigenvalue 1.92

(Negative response by wilderness-purist)

Hearing naturalist talks

•Viewing naturalist exhibits

Studying pioneer history

Talking with tourists

Factor VII. Escapism--eigenvalue 1.66

(Positive response by wilderness-purist)

Absence of people

Remoteness from cities

Absence of manmade features

Solitude

Tranquility

APPENDIX-L

Components of Values Factors

Item	Factor Shown by Response	
	Security	Insecurity
Are you ever afraid in the wilderness?	No	Yes
Would you sooner visit the wilderness alone or with a friend?	Alone	Friend
Do you feel wild animals are a danger to wilderness users?	No	Yes
Do you find the wilderness to be an uncomfortable place?	No	Yes
Do you feel secure in the wilderness?	Yes	No
Does the wilderness make you feel powerless and vulnerable?	No	Yes
Do you feel the more luxuries a party can bring, the better the camping trip?	No	Yes

Item	Factor Shown by Response	
	New Camping Ethic	Old Camping Ethic
Do you feel the wilderness has any value if man cannot get to it?	Yes	No
Do you feel the wilderness should be altered if the alteration benefits man?	No	Yes
Should people be able to camp wherever they please in the wilderness?	No	Yes
In the wilderness, should a person be free to cut boughs for his bed or wood for his fire?	No	Yes
If you saw a person in the wilderness doing something he shouldn't, would you say something to him?	Yes	No

*APPENDIX M**Correlation Matrix*

Pearson Product Moment Correlation Coefficients
(N = 40 for attitude motivation and values items)

	T	I	II	III	IV	V	VI	VII	A	B	C	D	E	S	I	NEW	OLD	P	N
T	1.000	0.444	0.597	0.696	0.361	0.541	0.067	0.668	0.492	0.223	0.077	0.263	0.017	0.111	0.037	0.170	0.963		
I		1.000																	
II			1.000																
III				1.000															
IV					1.000														
V						1.000													
VI							1.000												
VII								1.000											
A									1.000										
B										1.000									
C											1.000								
D												1.000							
E													1.000						
S														1.000					
I															1.000				
NEW																1.000			
OLD																	1.000		

(N = 4 for behaviour items)

P	0.511	0.496	0.132	0.289	0.980	0.289	0.000	0.863	0.224	0.817	0.155	0.853	0.317	0.000	0.000	0.109	0.000	1.000	
N	0.857	0.554	0.314	0.629	0.156	0.629	0.540	0.499	0.852	0.333	0.908	0.406	0.947	0.486	0.779	0.416	0.682	0.000	1.000

T = Total Attitude Score
I to VII = Attitude Factors
A to E = Motivation Factors
S = Security
I = Insecurity
NEW = New Camping Ethic
OLD = Old Camping Ethic
P = Positive Activities
N = Negative Activities

Correlation significant at $p < 0.05$ (only correlations between aspects of individual considered)

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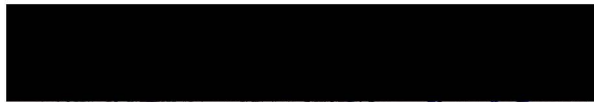
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CHARACTERISTICS, MOTIVATION, ATTITUDES, AND BEHAVIOUR OF SELECTED

OUTDOOR PARTICIPANTS

Author



Signature

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April 22, 1982

Date