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UNIVERSITY OF ALBERTA

TRAIL BICYCLING: A STUDY OF RECREATION CONFLICT IN NATIONAL PARKS

BY

ROBERT ZONNEVELD

A THESIS

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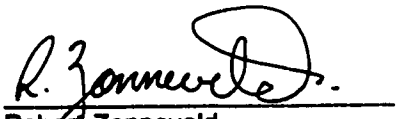

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled Trail Bicycling: A Study of Recreation Conflict in National Parks submitted by Robert Zonneveld in partial fulfillment of the requirements for the degree of Master of Arts in Recreation.

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ABSTRACT

Since park managers are becoming increasingly concerned with providing opportunities for quality outdoor recreation experiences, while still preserving resources, social impacts such as conflict between users are gaining management attention. This study, using a phenomenological methodology, explores the experiences of trail bicyclists and hikers and subsequent conflicts that occur in Banff and Jasper National Parks. Participant observation, document analysis and interview strategies were used to collect images and experiences of current national park users. Data is presented as media perceptions, the researcher's experiences and primarily as lived experiences by trail users. The results of this study suggest that the conflict between these two trail user groups is minimal and has changed as traditional park users become more aware of trail bicyclists and their experiences. Jacob and Schreyer's (1980) theoretical perspectives of recreation conflict was used to support the grounded theories and leads to a discussion of management implications. To reduce potential conflict situations, it is recommended that park managers provide the necessary information to allow park visitors to develop reasonable expectations about the behaviours, attitudes and park experiences of trail bicycling. Persuasive communication (Roggenbuck,1992) is one management strategy that is recommended to reduce or eliminate potential conflict situations.

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INTRODUCTION

1.0 TRAIL BICYCLING IN NATIONAL PARKS

Trail bicycling is defined as travel by bicycle on terrain other than paved roads. Originally an activity where participants rode only downhill, the use of trail bicycles, or more commonly known as mountain bikes, has evolved into a form of recreation that uses fire roads and hiking trails as it's setting. Not surprisingly, national parks have become increasingly sought after settings for this activity. National parks provide a high quality opportunity for wilderness recreation. The demand for trail opportunities from hikers and equestrian users has resulted in backcountry trail systems being developed which are also attractive to trail bicyclists. The growing popularity of trail bicycling in the national parks of western Canada was observed by the early 1980s, but was managed on a wait-and-see basis until 1983. At that time an interim directive was issued which included a listing of those national parks and specific trails where trail bicycling was considered to be acceptable.

In 1985, Parks Canada Western Region issued a directive which recognized trail bicycling as an appropriate recreational activity in national parks, providing that a "wilderness experience" was not compromised. The directive allowed for trail bicycling on designated trails as determined by individual park superintendents. In addition, it was acknowledged that trail bicycling would be monitored and reviewed on an on going basis with particular reference to the following issues: (1) environmental impact; (2) trends in use; (3) preferred types of trails; (4) public safety requirements; and (5) acceptance/conflicts with other backcountry users. It is this latter issue that is the subject of this research.

Conflicts with other trail users, specifically hikers and horse riders, have been determined as one of the criteria for managing trail bicycling. Although trail bicycling is considered an appropriate park activity by the Canadian Parks service, this view is not accepted by all trail users. Recorded complaints from other trail users indicate that the amount of conflict is limited, but studies sponsored by the Canadian Park Service (CPS) and/or undertaken independently suggests otherwise. The studies provide basic descriptive information on trail bicycling and treat the subject at an activity level. Consequently, policy and management practices have taken a heavy handed approach, excluding trail bicycling from wildland opportunity areas and trails where undesirable levels of conflict between trail bicyclists and other trail users may develop.

1.1 APPROACHES TO RECREATION RESOURCE MANAGEMENT

Current approaches to recreation resource management involve a behaviourlly oriented definition of recreation opportunity with a focus on providing for high quality leisure experiences. Behavioural approaches have developed in responce to the limitation inherent in the activity approache.

> ...(A) major weakness of recreation resource management and planning is to treat recreation participation primarily in terms of activities. Any given activity may be participated in by a variety of people from varying backgrounds with differing needs, relationships to the resource and relationships to other users. As a result, people within the same activity may vary considerably in the ways in which they choose to behave, and in the process, may foster negative responses from other participants (Schreyer, 1990:23).

In this context, conflict is one of the conditions that can undermine recreation experiences. Jacob and Schreyer (1980) have defined conflict as user dissatisfaction in which the recreationist attributes the source of goal interference to the behaviour of other individuals. They attribute conflict to four factors: (1) activity style; (2) resource specificity; (3) mode of experience; and (4) tolerance of lifestyle diversity. Previous park studies implied that all four

factors were likely relevant to examining trail bicycling in national parks and specifically the interaction between trail bicyclists and more traditional trail users such as hikers and horse riders.

Hammitt (1988:439) identifies 'conflict' as a growing concern for park and recreation planners and managers:

> Outdoor recreation conflict is one of the most common and difficult problems with which recreation planners and managers must contend. Recreational activities are an important aspect of a quality life, driven by some strong participation goals and motives, and conflict is bound to happen when goal interference occurs. To prevent potential conflict from occurring, it is necessary to identify and understand the causes, levels and means of prevention of recreational conflict.

Schreyer (1990,13) adds to the argument for the need to study conflict:

> Understanding conflict becomes very important in the effort to provide quality recreation experiences. Outdoor recreation in natural settings primarily involves the use of public lands ostensibly open to everyone. An inevitable consequence is the interaction of persons from varying backgrounds who bring with them differing recreational agendas, and who may not particularly get along with one another.

The scope of outdoor recreation conflict is seeded in the basic theories of recreation and leisure. People, as a part of any subculture, have with them a background of beliefs and values, and a set of agendas with which they will try to fulfil in their leisure pursuits.

> Diversity in values and preferences among people who use recreation resources is not a new phenomenon. However, there has been a dramatic increase in the range of diversity affecting public demand for outdoor recreation opportunities within the last generation (Johnson 1983). This diversification is occurring not only in the backgrounds of the persons who use such resources; it is also being seen in the types of uses being made of environments for recreations purposes. As public interest in recreation grows, as tastes change, as fads emerge, and as technologies evolve, the range of recreational activities and styles of participation appear to expand exponentially (Schreyer, 1990,14).

Schreyer (1990), has suggested that the increasing importance of leisure in our culture is a contributing factor to conflict. Leisure has become important as a vehicle for personal identification (defining lifestyle images) and therefore as a way of giving a person's life importance. He (1990,14) explains this notion of leisure growing as a lifestyle symbol:

> To the extent that people are increasingly willing to express their identities through recreation participation, such pursuits may have a greater potential role to play in their lives than what might otherwise be construed as being merely a pleasurable use of time (Haggard and Williams 1988). When something gains increasing importance in defining personal identification, it is not uncommon to give higher priority to that aspect of life. If this involves a recreational activity, then the activity itself may play a significant role in defining the individual's sense of personal well-being. Such priority may in the long run serve to enhance expectations, and a person may become more demanding of what the activity should provide, as there is more of a stake in the outcomes.

The purpose of recreation planning and management is to provide a satisfying experience for the participant within the frame work of the resource base. Conflict with other users can jeopardize the satisfying experience of participants and therefore has been incorporated into the policy and management of the CPS.

1.2 PURPOSE OF THE RESEARCH

The purpose of this research is to develop an understanding of "recreation conflict" as experienced by trail users, specifically trail bicyclists and hikers. This is accomplished by investigating these trail users using a behavioural perspective. The objectives of the research are therefore: (1) to determine the extent and types of conflict that are being experienced, (2) to determine how expressed conflict is developed and (3) to determine the implications the findings may have for managers providing trail opportunities in the mountain national parks.

1.3 METHODOLOGY

The interpretive paradigm provides the framework for this study. An ethnographic approach was adopted involving participant observation, in-depth interviews as well as more informal conversations in an attempt to understand trail bicyclists and their relationship to other trail users. A qualitative methodology was selected which would reflect the views and important issues as perceived by trail participants. By using information from participants' experiences and

identifying issues which they consider important it was anticipated that new information and insight into the phenomenon and in turn the management of trail bicycling would be obtained.

An interpretative approach and qualitative methodologies have historically been largely neglected in park research studies. Park studies and academic research in outdoor recreation have traditionally used surveys or the perceptions of park personnel and special interest groups as the sources of information to statistically describe park users and their concerns. These studies may provide accurate depictions of the number and types of park users, where participants are recreating, and even how much they are spending, but they do not explain the behaviour of park users and the experiences that motivate their participation. "(E)xperimental methods, statistical measures and survey research- none of these methods can fully encapsulate the subjective elements of social life" (Burgess, 1987:79). A qualitative methodology may therefore supplement existing quantitative data and possibly provide new information which traditional research methods do not provide. Qualitative methods also work particularly well for investigating new phenomena such as in the case of trail bicycling. Schreyer and Driver (1990) have referred to grounded theory discussed by Lincoln and Guba (1985), to illustrate the importance of alternative research methods. For example, they used open-ended responses in a study of recreation benefits:

> (W)hen exploring a new area of inquiry, there is often a value in attempting to be more flexible, seeking to find insight in more unstructured ways of gathering data. The perspective of naturalistic inquiry seeks to understand the perceptions of people in order to develop a richer and more accurate picture of how people themselves perceive such phenomena (Schreyer and Driver,1990:25).

Downing and Clark (1985) have also noted the contribution that qualitative, naturalistic, grounded inquiry can make toward understanding social issues in resources management. They turned to this type of inquiry because of the inability of quantitative methods to explain or predict recreational behaviour. Other researchers have also recommended alternative approaches to

traditional methodologies in the recreation and leisure discipline and suggest the use of qualitative research methods (Godbey,1989; Jackson and Burton, 1989).

Behavioural studies in outdoor recreation which investigate the experiential nature of activities are not new. However, the nature of the activity of trail bicycling does not clearly transfer into the existing categories of the motivation and conflict literature. Trail bicycling appears to be a hybrid of activities, where a trail bicyclist can experience the "wilderness" as defined by a backpacker and/or may use this activity as an end in itself, such as a nordic skier experiencing exercise and the thrill of speed. Therefore, the purpose of this research is to explore the current attitudes, perceptions and expectations of current trail bicyclists and discover the interrelationships that they may have with perceptions of conflict..

The main opposition to the use of national park trails by trail bicyclists derives from other trail users. Resource managers have cited "conflict between users" as the main issue which labels the activity of trail bicycling as problematic. Recreation conflict literature has traditionally concerned itself with the asymmetrical relationships between motorized and non-motorized activities. The trail bicycle issue, appears to transcend the question of using other than human powered propulsion, but involves notions of: safety; trail etiquette; acceptable behaviour; perceived resource impacts; and wilderness appropriateness.

The objectives of this study, as already stated, are set in the context of Banff and Jasper National parks. The Canadian Park Service (CPS) was chosen for this study for two main reasons. First, the problem of trail bicycling and conflicts were apparent on the trails managed by the CPS. The locations of Banff and Jasper National Parks were settings that were easily accessible and issues of recreation conflict were apparent in the media and from current users. Second, the CPS considered conflicts between trail bicyclists and other trail users significant enough to limit bicycle access and develop policy to exclude bicyclists according to perceptions of conflict. However,

other land managers and park agencies in Alberta have not considered bicycles and associated conflicts as a large enough problem to develop restrictive policies.

Jasper and Banff National parks are both located in the Rocky Mountains of Alberta. Banff National Park was Canada's first national park with the dual purpose of preservation and public use. Banff's more than a hundred years of history, and to a lesser extent the history of Jasper, has created tourist destinations of national and international significance. The demand to visit these parks is constantly increasing with the majority of visitors attracted to the townsites of Banff and Jasper and their opportunities for shopping and site seeing. The majority of tourists will visit road accessible site attractions and participate in front country activities such as day hiking. Trail bicycling is a new activity with a history of no more that ten years of experience. Participation in this activity has largely taken place in the past five to eight years. This recent participation is a key factor in the issues associated with trail bicycling. The new trail users have come into direct contact with traditional park users, hikers and horse riders, who have mixed emotions in regards to the appropriateness of trail bicycling.

> "(I)f the mountain bike had been around for 200 years, and the horse was just invented," says one trail ranger, " the horse would have the same trouble being accepted on the trail" (Grost, 1989:75).

1.4 DELIMITATIONS OF THE STUDY

The following are delimitations of this research:

(1) No attempt will be made to statistically analyse the data, such as the number of people experiencing conflicts in the national parks.

(2) Data was gathered primarily from the perceptions of trail bicyclists. To a lesser extent hikers were included for their perceptions of trail bicyclists and possible conflicts. Other trail users such as equestrian users were not included due to time restraints and to exclude additional factors that might have complicated the current research beyond the scope and resources of the researcher.

(3) The perceptions of trail users were focused on those people who experience backcountry settings. Recreation on townsite trails was considered an "urban experience" and not included in this research. The focus of this research was to explore conflict within 'wilderness' experiences associated within a national park and not simply conflicts between bicyclists and pedestrians.

(4) No attempt was made to measure directly the environmental impacts of trail bicycling. References to this dimension of trail bicycling was obtained through comments during the interviews.

1.5 ORANIZATION OF THE STUDY

The focus of this study is to explore the behaviour of trail bicyclists and the effects this group has on hikers. Concepts of recreation conflict is situated in the broader recreation literature topics of social impacts and the behavioural approaches for understanding motivations. This literature will be explored in chapter two as will the specific topic of recreation conflict. Recreation management principles will also be briefly reviewed to assist with a discussion of management implications. The reasons for selecting an interpretive paradigm is given in the methodology chapter. Chapter three will also discuss the choice for the qualitative methodologies of participant observation and interviews. In chapter four and five the data collected from this study is presented. Chapter six discusses and analyses the data in context of existing conflict theories.

This chapter also presents the management implications the data has for the CPS. A summary of the findings, a discussion of the research process and suggestions for further research conclude this study in chapter seven.

CHAPTER TWO

LITERATURE REVIEW

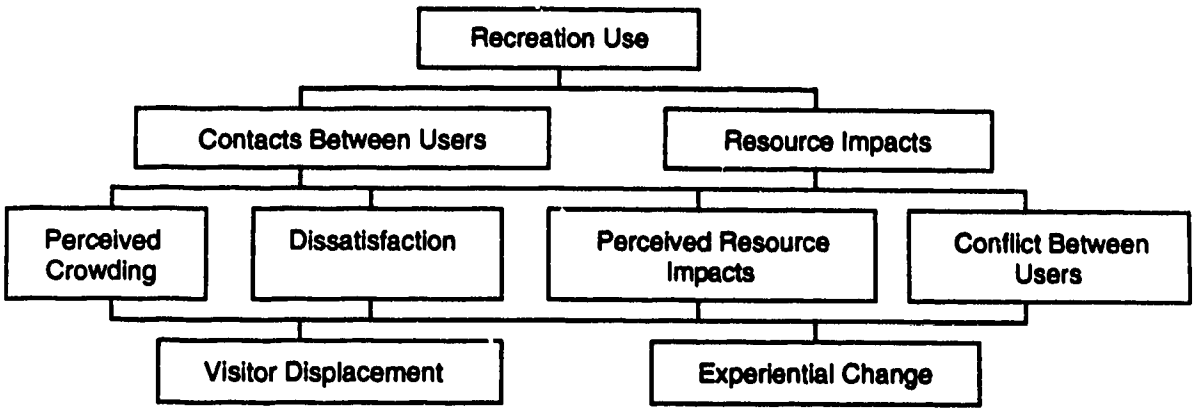
2.0 INTRODUCTION

This chapter reviews existing studies which have addressed the issues associated with trail bicycling and recreation conflict. The chapter is divided into subsections that include the dynamics and development of conflict between the trail users of trail bicyclists and hikers and the possible management of these 'conflicting' activities in a national park setting. The subsections are organized to reflect the changing emphasis of outdoor recreation social science research from an activity perspective to acceptance of the importance of understanding recreation behaviour. Ecological concerns, such as environmental impacts, are not included within the scope of this research. Included in this literature are the social science concerns of crowding and carrying capacity, perceived impacts, satisfaction, and displacement and rationalization. The main emphasis of this chapter follows with a discussion of the concepts and theories of recreation conflict. Reasons for studying conflict and possible management techniques for recreation conflict conclude the chapter.

2.1 'CONFLICT' IN THE BROADER AREA OF OUTDOOR RECREATION

The primary focus of this research is the conflict of trail users in a national park setting. To develop an understanding of the dynamics of conflict it is appropriate to examine the position of conflict in the outdoor recreation social science literature. Kuss, Graefe and Vaske (1990:190) have presented a progression of stages that are involved in the social impacts of recreational use:

Figure 1. Social Impacts of Increasing Recreation Use



Source: Kuss, Graefe and Vaske (1990:190)

This figure details the scope and development of social impacts resulting from increasing recreation use in terms of a progression of sequential events. This progression of social impacts will be used to organize a discussion of the social science literature in outdoor recreation.

> Studies show that there is no single predictable response of visitors to varying use levels. Rather, visitors are affected by a series of interrelated impacts that result from recreational use of natural areas. ... Recreational use leads directly to tangible outcomes, such as contacts between visitors and impacts on the natural environment. These social and environmental impacts, in turn, can lead to a variety of perceptual and behavioral responses by visitors (Kuss et al, 1990:187).

The two tangible outcomes of recreation use are the primary research subjects for outdoor recreation. "Issues in outdoor recreation are conventionally dichotomized into ecological concerns [e.g. environmental impacts] and social science concerns [e.g. crowding and conflicting uses]" (Manning, 1986:1). Ecological concerns were the primary topics of early outdoor recreation research. This resource-based orientation was a result, in part, due to the fact that most of the outdoor recreation managers were professionally trained in the traditional biological disciplines (Hendee and Stankey, 1973). Although the impacts on the natural environment play a part in the social impact research, the present research will not address the issues of environmental impacts but will focus on the social aspects as they relate to conflict between users. "Social problems such as crowding began to supplement traditional concerns for environmental

impacts, and participants in outdoor recreation activities were recognized as having socio-economic characteristics, attitudes, and preferences which might be of interest and use to resource managers" (Manning,1986:4).

2.1.1 Contacts Between Users

Figure 1 shows that the first level of social impacts from recreation use is contact between users. Contact between users was initially studied through empirical research that described participation in activities and the social characteristics of participants. Researchers, using survey and observational approaches, were interested with insights into visitor preferences for campground characteristics, management policies, and, facilities and services (Manning, 1986). This research sought to identify and explain the attitudes, preferences and perceptions of participants concerning their activities and the physical environment. Two results from these studies worthy of note are; (1), that the methodologies of both survey and observational techniques used in these studies have had mixed results with the result that"(t)he most valid approach is to rely on a balance between research techniques, each acting as a check on validity for the other." (Manning, 1986:30); and, (2), studies concerned with user perceptions have identified a difference between the perspectives of the recreational user and the resource manager. For example differences have been found to exist between perceptions of environmental impacts, the purpose of natural areas and management techniques (Martin, McCool and Lucas, 1989).

2.1.2 Perceived Crowding

> Studies of crowding, both in outdoor recreation and other areas of human behavior, have consistently viewed crowding as a response to a given density level (Kuss et al, 1990:190).

The literature on crowding is concerned with the problems associated with increased densities on the satisfaction or type of experience sought by an outdoor recreation participant. For example, a satisfaction model (Heberlein and Shelby, 1977) was created to find the optimum number of visitors with the greatest overall satisfaction. The first tests of the satisfaction model were empirical in nature and were given as hypothetical trail encounters (Stankey, 1973). Crowding research has since become one of the most frequently studied aspects of outdoor recreation (Shelby, Vaske and Heberlein, 1989). The results of these studies, however, have been mixed and generally reflect a low statistically significant relationship between the variables of density and satisfaction (Lee, 1977; West, 1981; Manning, 1986). The reason for the mixed results in the crowding research has been theorized to be associated with the coping mechanisms (behavioural changes) of individuals and groups. "When the environment becomes too densely populated, new behaviours are adopted which help relieve associated stress and anxiety" (Manning, 1986:58). Crowding, as studied in solitude research, was also found to be more than a question of contact numbers but an interrelationship between user's expectations for backcountry contacts, preferences for contacts, and sightings of human-use impacts upon the environment (Bultena, Field, Womble, and Albrecht, 1981) Finally, the results of these studies have varied because crowding, unlike density, is a psychological term and has a normative meaning dependent upon the activity being pursued and the setting in which the activity is taking place (Shelby Vaske and Heberlein,1989; Manning, 1986).

Crowding is considered a negative term due to normative definitions. Three factors form the basis for crowding norms (Manning,1986): personal characteristics of visitors, the characteristics of others encountered, and, situational variables.

Personal characteristics of visitors that contribute to a perception of crowding include; motivations for outdoor recreation, preferences and expectations for contacts, experience level, and attitudes towards management (Manning,1986). Summarily, it has been found that the

various motivations to participate in an activity will correlate differently with feelings of being crowded. Furthermore, perceived crowding was found to be more affected by people's expectations of contacts, and expecting to see fewer people, than were the people's preferences for the number of other people seen. The experience levels of users, as demonstrated through specialization or refinement of tastes (Bryan, 1977), reflect the notion that the more experienced user, with more defined expectations, will tend to be more sensitive to higher use areas and therefore will report a feeling of conflict (Schreyer, Lime and Williams, 1984; Hammitt, McDonald and Noe, 1984; Schreyer, 1982). While demographics have been found to be statistically insignificant in explaining crowding, the attitudes towards wilderness on a wilderness purism scale have shown some empirical relationships.

The characteristics of other participants encountered is another factor affecting the crowding norms and therefore have direct implications for conflict research. Many empirical studies have shown a relationship between crowding and the mode of travel of others encountered. Canoeists have been shown to be more resentful of motorized boaters, and motorized canoe users, as compared to meeting other canoeists (Lucas, 1964). Stankey (1980) found that in a study of encounters between backpackers and horseback riders, that users are most satisfied meeting others of their own kind. Research has also found that the size of groups encountered affects crowding where users prefer to encounter a number of smaller groups than one large group (Stankey, 1973). However, numbers can be overridden by the behaviour of the other encounter group. Crowding norms appear to be affected by negative behaviours of yelling, noise, littering and polluting lakes and non-compliance with rules (Manning, 1986) Finally, the perception of the notion of alikeness has been linked to crowding norms, where the degree to which one perceives another as being alike will affect the degree of feeling crowded.

The notion of alikeness is associated with the concepts of solitude, intimacy and privacy where it is taken for granted that others will act in a similar manner. If others encountered display

unfamiliar or disruptive behaviours, the notion of alikeness would suggest that these behaviours may conflict with a social group's shared values and behaviour norms and result in perceptions of crowding. The term "symmetric antipathy" has been used to describe the phenomenon where the feelings of crowding is one directional and is not always reciprocated. However, Jackson and Wong (1982) have shown that between crosscountry skiers and snowmobilers conflict is not static and the asymmetrical situation will evolve into a symmetrical interference of goals and mutual disliking. The notion of alikeness is further emphasized by the lack of well established social norms for wildland types of outdoor recreation (Cheek and Burch, 1976), using recreational activities for symbolic identification of a cultural group (Knopp and Tyger, 1973; Burch, 1974) and to derive social status from within an activity (West, 1977).

Where encounters occur and how this environment is perceived will affect perceptions of crowding and will depend upon situational variables. Situational variables include the type of recreation area, location within an area and environmental design and quality. The type of area or recreation setting classification varies according to landforms, vegetation and facilities and range from primitive wilderness to highly manipulated urban areas. Recreators have developed expectations for specific types of experiences in specified settings. Expectations for user density, such as "the number of other people that recreators engaged in a given activity (hiking for example) can see without feeling crowded is much lower in a primitive setting than in more developed settings", has led to the development of management tools such as the Recreation Opportunity Spectrum [ROS] (Daniels and Krannich, 1990:167). Location of contact within an area has found users to be more sensitive towards encounters at campsites as compared to those on trails (Stankey, 1973;1980; Lucas, 1980), and, in the interior of a wilderness as opposed to at the periphery (Stankey, 1973). Environmental factors have shown to have some affects on crowding by creating a physical design that is already perceived as crowded such as the proximity of campsites and insufficient facilities, and by unexpected environmental disturbances (Martin, McCool and Lucas, 1989; Manning, 1986).

2.1.3 Carrying Capacity

Related to crowding is the concept of social carrying capacity. Carrying capacity research was initially a concept developed in range and wildlife management (Wagar, 1974) but was subsequently applied to outdoor recreation. However, the use of recreation carrying capacity, as a management concept has been problematic because of the lack of a simple relationship between density and satisfaction (McCool, 1989). The alternative approach is to determine a prescribed set of conditions (involving resource, experience and managerial considerations), with variations from which are considered in terms of the limits of acceptable change [LAC] (Martin, McCool and Lucas,1989). Recreation or social carrying capacity was found to be a value judgement based on three broad considerations of 1) natural resource considerations (physical and biological characteristics) 2) institutional factors (legal directions and agency mission) and 3) social factors (needs and wants of people). The recreational use of a natural area will result in some type of disturbance be it the integrity of the wilderness resource or the quality of a visitor's experience. Social carrying capacities of an area is a value judgement based on not only a quantifiable disturbance level, but is a decision by managers as to their goals of managing the resource and the people who visit these areas (Martin, McCool and Lucas,1989). Carrying capacity literature explores the ideas of resource impacts and people's perceptions of these impacts.

2.1.4 Perceived Resource Impacts

The perception of human impacts on the environment is related to the concept of crowding and influences the evaluation of quality in visitor experiences (Kuss, Graefe, and Vaske, 1990). The loss of experience quality is dependent on: 1) recognition of environmental deterioration (Cole and Benedict, 1983), 2) importance given to impacts in relation to other

aspects of the setting, and 3) the evaluation of a given impact as desirable or undesirable (Lucas, 1979). Environmental disturbances are considered more negative when the cause is perceived as human intervention as opposed to natural processes and more acceptable when it is the result of a person's own activity (Kuss, Graefe, and Vaske, 1990).

> Whatever the causal linkages, perceptions of both crowding and resource impacts apparently accompany increasing use levels and, in turn, influence evaluations of quality in recreation experiences (Kuss, Graefe, and Vaske, 1990:191).

2.1.5 Satisfaction/Dissatisfaction

"(S)atisfaction is probably the most commonly used indicator of quality in the recreation experience" (Kuss, Graefe, and Vaske, 1990:191). As a goal of outdoor recreation, satisfaction has repeatedly been used to identify and manage quality and the provision of recreation opportunities (Manning, 1986). Satisfaction has been examined in terms of two theories. 1) Discrepancy theory, where overall satisfaction is determined from discrepancies between the factors describing what was experienced, compared to what was expected, and 2) Fulfilment theory, where overall satisfaction is shaped by the extent to which the various experience factors are fulfilled or satisfied (Rollins and Chambers, 1990).

> (S)atisfaction is influenced not only the conditions one encounters at a recreation area, but also by what the visitor is hoping to achieve through his or her visit. Hence, satisfaction often is not strongly related to overall use levels, but is interrelated with the broad range of impacts to the experience. (Kuss, Graefe, and Vaske, 1990:192).

2.1.6 Displacement and Rationalization

Before reviewing the recreation conflict literature, which is the main concern of this literature review, the discussion will address the two final levels of social impacts; visitor displacement and experiential change.

> Perceptions of crowding, dissatisfaction, human impacts and conflict may not always occur, because visitor's responses to a given situation depend on their individual expectations and norms. In addition, people use various coping strategies to reduce or eliminate the potential negative effects of visitor densities (Kuss et al, 1990:192).

Displacement is a change in a participant's recreation pattern (in time or space) to avoid the dissatisfaction associated with expectations such as perceived crowding or conflict. The dissatisfied recreationalists are then displaced by users more tolerant of higher densities or who have more flexible expectations. The second coping mechanism, rationalization, is the phenomenon where the participant will report a positive outing, regardless of the conditions, "since recreation activities are voluntarily selected and sometimes involve a substantial investment of time, money and effort" (Manning, 1986:61). These coping strategies reduce or eliminate the potential negative effects associated with increasing use, but may also influence a person's perceptions of the experience.

> When visitors modify their perceptions and/or behavior to compensate for rising use levels, the end result is a change in the character of the recreation experience to be found in a given area (Kuss et al, 1990:216).

2.1.7 Behavioural Approach To Recreation Involvement

Using the behavioural approach, to describe recreation involvement, appears to be a logical extension from the earlier more descriptive research. Understanding 'why' people participate in specific outdoor recreation was initiated by the motivation research by Driver and Tocher (1970). One of the most important outcomes of motivation research has been to think of recreation as an experience and not just as an activity (Driver and Tocher, 1970). Motivation research is based on the social psychology expectancy theory " which suggests that people engage in activities in specific settings to realize a group of psychological outcomes which are known, expected, and valued." (Manning, 1986:80). The behavioural approach was then

expanded to four levels of demand for outdoor recreation that include; activities, settings (environmental, social and managerial), experiences and benefits. A large number of studies have been directed toward empirically testing the behavioural approach of studying outdoor recreation. Scale items have been developed to measure the importance of a motivation for participation. The domains identified in the research have been used to identify distinct types of visitors and to group people (according to their motivations) in order to make management decisions.

An extension of the behavioural approach has also been used to manage other issues including, substitutability of recreation activities, linkages between motivations for recreation and attributes of outdoor recreation settings and, the causes of conflict between recreationalists (Manning, 1986). Substitutability is the notion that activities with similar underlying meanings could be substituted to best meet managerial objectives. However the limited number of studies in this area have had marginal success in linking motivations with the complex notions of substitutability (Manning, 1986).

Motivations and setting preferences have been linked through cluster analysis to group like-people (activities) together. This research is still preliminary with mixed results and only suggests that there is a linkage between motives, settings and activities (Manning, 1986). One study using cluster analysis has found positive results linking clusters of activities with related technologies (including hybrid activities) with resentment relationships where there is an asymmetrical relationship between more and less physically obtrusiveness technologies (Devall and Harry, 1981). The behavioural approach looks beyond the numbers of the crowding research and attempts to understand the experiential nature of recreation and the outcomes or benefits being sought.

2.1.8 Summary

It is evident in the outdoor recreation literature, as seen in the Kuss et al diagram, that recreation conflict has ties to the activity oriented concept of crowding. According to Kuss et al (1990) crowding and conflict between users, as well as perceived resource impacts and dissatisfaction, are possible outcomes of the contacts between users and resource impacts which ultimately may result in visitor displacement and/or experiential change. The crowding literature is well developed and apparently interconnected with the issues of conflicts. The behavioural approach towards studying outdoor recreation is becoming more popular and, unlike the crowding literature, may go beyond the problematic 'activity' perspective of recreation and provide insight into understanding the 'experience' of trail bicycling .

2.2 CONFLICT IN OUTDOOR RECREATION

As noted earlier in this chapter, conflict with other users is a dimension of visitor impact. Initially, recreation conflict was studied to identify that conflict did in fact exist between different recreational groups. For example, differences in motivations have been used to explain the conflict between the bipolar positions of different river floaters (Knopf, Peterson and Leatherberry, 1983), between fishermen and canoeists (Driver and Bassett, 1975), between fishermen and water skiers (Gramann and Burdge, 1981), and between cross-country skiers and snowmobilers (Jackson and Wong, 1982). Jackson and Wong's (1982) study also suggests that differences in motivations can be linked to a person's overall preferences towards recreational activities.

The majority of these studies have involved the more clearly defined activities where the motives for participation are clearly distinctive as being different or ' in conflict' with another activity. The classic examples of this situation describe the conflicts associated with motorized and nonmotorized recreation activities. Bury, Holland and McEwen (1983) have developed a

conceptual model of recreational conflict that uses three characteristics of activities to measure the degree of potential conflict: (1) the spatial or temporal proximity of the activities, (2) the degree of environmental dominance inherent in each activity, and (3) the extent of participants' dependence on technological products. Activity characteristics (2) and (3) are put on the x and y axis of a grid. The location of an activity , as placed on the grid, is activity characteristic number (1).

It is important to examine this research a little closer since natural resource managers are requested to use this model as a "simple estimator of potential conflict situations" (Bury, Holland and McEwen, 1983:401). The first characteristic, spatial and temporal proximity is based on the notion that "(c)onflict between recreational activities can occur simply because the activities are too close in space and time" (1983:401). This suggests that incompatible activities, the example given in their article uses nature study and motorcycling at the same time and place, will result in conflict. However, this characteristic can not explain the conflict that occurs between inter-group activities and the perception that conflict exists when two activities do not exist together in space or time.

The second conflict characteristic is dominance over the environment. and is described as follows (1983:401):

> Environmental dominance express the extent to which an activity requires "conquering" the environmental resource on which it is based. Also involved is the desire for autonomy and control of a situation or resource. Dominance relates to the challenge or risk-taking aspect of activities. Sensation-seeking and conquering a dangerous resource or situation is a core element of these activities. Environmental dominance also connotes a sense of individual achievement.

The degree of environmental dominance to which an activity is labeled is dependent upon the impact on the resource. The premise for this is that (1983:402):

> (c)ommon to all these activities is freedom to prove oneself by selecting activities and settings that permit maximum individual control. This freedom many times causes individuals to ignore or overlook the environmental changes caused by their activities. Such persons need not have negative attitudes toward

> environmental preservation, but the drive for dominance is greater and takes priority in their actions.

Using this rational, Bury et al. suggest it is not required to understand the user's motive but only the effect of an activity (physical impacts) as an indicator of the activity's dominance over the environment. However, the dominance over environment factor does not take into account the possible individual differences of environmental ethics, knowledge and education, past experiences and the possibility that people may participate in more than one outdoor activity and may transfer ethics from one activity to another.

The third characteristic of this conflict model is dependence on technology. Their model suggests that dependence on technology is a bipolar concept where on one side there are people who desire to use technology, depicted as machines and equipment, to increase comfort and ease in outdoor recreation. On the other end of this scale are those people who desire to be removed from the sites and sounds of technology therefore avoiding stimuli that is thought of as urban. The more ("high") technologically dependent activities are thought to produce more or a higher degree of noise, movement or complexity which are considered as sensory obtrusiveness (Harry, 1976). In this situation, conflict is a result of various levels of sensory obtrusiveness.

> Some prefer use of the newest items available and abundant "action" and challenge- so much that it must be technologically enhanced. Others prefer quiet and use of more natural, simple tools for obtaining a desired experience (Bury et al,1983:402).

The spatial arrangement and linear distance between the activities in this model is used as a measurement of compatibility. The further away an activity is located from another increases the chance that the two activities have incompatible goals and therefore increases the possibility of conflict. This model is problematic due to presumptions that are made about the behaviours of the people engaging in recreation activities. Using the activity approach, which "uses numerical measures in a head-counting manner" (Jackson, 1989:79) does not take into account the reasons 'why' people are doing what they are doing and if they are satisfied or enjoying their

recreation activities. Although this model does help to explain the complexity of recreation conflict, it does not address the behaviour issues underlying conflict. Activities can not simply be quantified as being technology dependent or environmentally domineering to describe their commonalty (shared interests) and compatibility with other activities. Individual backgrounds comprised of; past experiences, motivations, and perceptions of recreation opportunities and environments, will influence the occurrence and degree of conflict that occurs between various outdoor recreation users.

2.3 THEORETICAL PERSPECTIVES OF RECREATION CONFLICT

Jacob and Schreyer (1980) developed one of the first theoretical perspectives of recreation conflict in an attempt to examine the behavioural dynamics and origins of conflict. Conflict is defined as (1980:369):

> goal interference attributed to another's behavior. This definition assumes that people recreate to achieve certain outcomes-goals. Discrepancy theory equates dissatisfaction with the difference between actualized and desired goals (Fishbein and Ajzen, 1975). Conflict, then, can be viewed as a special class of user dissatisfaction, where the cause of one's dissatisfaction is identified as another group or individual's behavior.

Jacob and Schreyer expand on this definition to eliminate dissatisfaction associated with same goal/different means incompatibility and limited opportunities for goal attainment (1980:369).

> The source of goal interference must be identified. An individual must be willing to make the link between goal interference and another person's behavior for a conflict to exist. This may occur in two ways: 1) Another person's behavior can actually alter the desired social or physical components of the recreation experience. 2) No one else may be responsible for the goal interference and scapegoating occurs. Scapegoating is the process whereby feelings of personal frustration or failure are projected onto another, thus displacing the locus of responsibility (Allport, 1957). ... goal interference is not an objective state but must be understood as an individual's interpretation and evaluation of past and future social contacts. Social contact, defined as knowledge of another's behavior, is necessary condition for conflict. Contact can be direct-meeting someone face to face-or indirect, such as seeing a tent on the other side of the lake.

In addition to the conflict definition and the major factors behind outdoor recreation conflict (to be discussed next), Jacob and Schreyer (1980:370) make the following observation concerning the nature of recreation conflict:

> The nature and extent of user interaction should be a major focus in understanding conflict. When people are questioned about conflict, it is often not clear whether their evaluation is based on personal experience or on information obtained from newspaper, gossip, or other sources. Further, all indicators might reveal a high potential for conflict, yet the actual number of reported conflicts may be deflated because of low user densities and/or few opportunities for social contact.

2.4 MAJOR FACTORS BEHIND OUTDOOR RECREATION CONFLICT

Jacob and Schreyer's (1980) theoretical perspective of recreation conflict states that there are four major factors which produce conflict in outdoor recreation: (1) activity style, (2) resource specificity, (3) mode of experience and (4) life style tolerance. "Any one factor is sufficient cause for conflict, but a conflict will most likely entail a combination of them." (1980:370). For later discussion it is necessary to describe these four factors in more detail.

2.5 ACTIVITY STYLE

Activity style can best be described as how an individual defines the meaning of an activity and behaviours that are appropriate to carry it out. The ego is involved in the personal meaning of an activity , where the leisure activity or "(r)ecreation presents one's values and lifestyle for other's inspection" (Jacob and Schreyer, 1980:371). The choice of an activity and how it is performed will vary with each participant. The varying degrees of an activity style is determined by (1) intensity of participation, (2) status, (3) range of experience and (4) definitions of quality. The intensity of participation is the amount of 'central life interest' given to the activity. The more the intensity of involvement in the activity (through time commitments and importance given to the activity) the greater the chance of conflict with others that do not share the same intensity. Jacob and

Schreyer (1980) suggest that as intensity increases the specific norms of proper behaviour become more defined. It has also been observed that specific types of specialization and recreation involvement, where a "combination of high centrality, familiarity , and experience creates a clientele that is critical of management intervention when it interferes with practices that are central to the focus of recreational involvement" (McIntyre and Pigram, 1992:13). Deviations from a norm, by other recreationalists, could result in conflict with people who hold specific rules or behaviours as important for a quality experience. Specialization develops specific appropriate behaviours (Bryan, 1979) or norms, therefore isolating groups with different degrees of specialization, which may lead to intra-activity conflicts.

Status hierarchies in recreation are often based on equipment and expertise possessed (Bryan, 1979). Status is achieved with the visual symbols of the latest equipment in design and innovation, expensive brand name equipment, and with superior practical skills or expertise. However, McIntyre and Pigram (1992:4) disagree and contend that "(e)quipment ownership may reflect conspicuous consumption, aspirational over buying, socioeconomic background, or lifestyle rather that commitment to or involvement in an activity." Conflict may occur with the interaction of status conscious participants with the status unconcerned, and between the status conscious at different status levels.

The third element of activity style is the range of experience and definitions of quality. This element suggests that as a person's experience increases, standards are created, and expectations are then made on future participation. A quality experience is based on previous memories and the components that made a particular experience better than another. A beginner at an activity does not have specific expectations for what is a quality experience. Conflict may occur with an increase of expectations for the desired quality experience.

> Less resilient definitions of quality often result in demands for limitations on the number or kinds of incoming users. Experiences formerly defined as high quality often become seen as commonplace when affordable, sophisticated

technologies increase access and reduce participation skill requirements; therefore, part of being a higher status participant also involves behaving in accordance with a specific, accepted definition of the quality experience (Jacob and Schreyer, 1980: 373).

2.6 RESOURCE SPECIFICITY

The importance an individual attaches to a place or to the use of a particular recreation resource is resource specificity (Jacob and Schreyer, 1980). Similar to activity style, resource specificity will vary according to an individual's perceptions of 1) evaluation of resource quality, 2) sense of possession, and 3) status. For example, Banff National Park has been used as an example of resource specificity where people have personal attachment and expectations of this park, as a widely shared symbol of Canadian culture, without having physically visited the park (Schreyer, 1989). The evaluation of a resource, usually based on a person's past experience of the specific location or of a similar type, will produce conflict when one recreationalist does not rate a resource as high a quality or with as much intense emotional experience as another resource user. A person's sense of possession to a resource will increase as a person becomes more familiar and attached to a location. A sense of possessiveness will increase with time and commitment and as memories and traditions develop. An individual's attachment to a place has also been observed to be related to functional attachments, attributes of a setting to fulfil the need of a place to pursue an activity, and emotional attachments are those feelings a person has for a setting regardless of the activity. Functional attachments were found to have a greater influence (increased perceptions) on recreational conflict as compared with emotional attachments (Allen, Chubb and McDonald, 1988). Status is "associated with knowing special opportunities, a place's "secrets," and its past". (Jacob and Schreyer, 1980) Conflict will occur when lower status participants "invade" an area, making it common place and therefore reducing the intimate relationship a high status (long term) user may have for an area. Emotional and symbolic attachments to place has also been observed to increase with: (a) belonging to wilderness, conservation or outdoor organizations, (b) study respondents who reside in rural

areas, (c) activities that are more place focused (as opposed to activity-focused), (d) those who travel alone (as opposed to organized groups), (e) over night stays that are more than two nights, and (f) with participation in certain activities such as hunting and nature study. However, attachments are inversely related to education and income (Williams, Patterson, Roggenbuck and Watson,1992).

2.7 MODE OF EXPERIENCE

How a person transports him/herself and interacts with the environment is considered his/her mode of experience. The various modes of experience can be arranged on a continuum with the bipolar factors; focused and unfocused. Yi-Fu Tuan's (1978) work on "place vs space" is often quoted to explain the different ways an environment can be perceived. An unfocused mode (Jacob and Schreyer,1980:375) is characterized as:

> an experience of environmental generalities, overall spatial relationships, the lay of the land but not its particulars. Movement, fleeting images, and broad, sweeping impressions characterize this mode (Jackson, 1957). Yi-Fu Tuan would describe this as the experience of space, embodying feelings of freedom and spaciousness (Tuan, 1978).

The focused end of the continuum includes those activities that are concentrating on details and close examination of the environment. The focused mode traveller will frequently interrupt movement to "take a closer look" and attempt to understand or appreciate features of the resource. Mode of experience is cited as the source of conflict between mechanized and nonmechanized activities. However, Jacob and Schreyer (1980: 375) suggest that the issue(s) may be more complex:

> This is more than a question of man-made verses natural stimuli. Many intermediate possibilities exist between the extreme case of the gravel pit dirtbiker and the crosscountry hiker who hates trails; for example, the crosscountry skier who does not mind encountering one or two snowmobiles. However, as the mode of experiencing an environment becomes more focused, an individual produces more rigid definitions of what constitutes acceptable stimuli and is increasingly intolerant of external stimuli. Moving along the continuum from unfocused towards focused is analogous to going from low conflict prone to extremely conflict prone modes of experience.

2.8 TOLERANCE FOR LIFESTYLE DIVERSITY

The fourth factor influencing recreation conflict is the degree to which a person can tolerate the differences of others using the same resource. As an extension of basic societal beliefs, recreation settings are subject to prejudices (ethnic, racial, and social class distinctions) and sub-cultural stereotyping. A myriad of social perceptions evolve as people try to sort, evaluate (often as stereotypes), and reinforce lifestyle choices which includes their choices for recreation. An example of this is the perception of technology and resource consumers, where motorized recreation users are stereotyped as " symbolic of a society that arrogantly exploits and consumes resources" (Jacob and Schreyer, 1980:377). Conflict will occur when an individual or group perceives and evaluates another's values, behaviours, or presence as being inappropriate (Schreyer, 1990).

2.9 TYPES OF CONFLICT

The theoretical framework established by Jacob and Schreyer (1980) is built upon conflict as experienced by recreation users. However, conflict is not limited to intergroup or user to user situations. Little and Noe (1984) for example have postulated that there are nine levels of recreation conflict. They proposed a matrix, using the source of impact and the recipient of impact of the visitor, the park, and the community as axis headings and subheadings, to identify the following nine conflict types: (1) Visitor-Visitor, (2) Visitor-Park, (3) Visitor-Community, (4) Park-Visitor, (5) Park-Park, (6) Park-Community, (7) Community-Visitor, (8) Community-Park, and, (9) Community-Community. This matrix identifies the potential conflict types and the direction of the conflict that may exist in a single area. As noted by Hammitt (1988:433) the importance of this work is "to emphasize that conflict in outdoor recreation is not simply a user to user confrontation

over spatial allocation of recreational activities" but rather, managers must contend with the sources of conflict, including themselves, in order to resolve conflict situations.

2.10 NORM-INTERFERENCE CONFLICT

The theoretical perspectives to this point have all based conflict on goal interference. Ruddell and Gramann (1991) have proposed that conflict is more than the interference from an individual or group in obtaining the recreation goals of another individual or group but may originate as norm interference. Norms are "evaluative standards of appropriateness regarding activities, behaviours or settings" (Ruddell and Gramann, 1991:7). Norm-interference research was developed from studies focusing on levels of specialization (Bryan 1979) and from a specific form of recreation conflict as expressed as crowding (Ruddell and Gramann 1991). According to these authors the goal-interference approach has two main limitations. First, recreation goals are unstable and research studies are " 'creating' salient goals through the measurement process" (1991:3). Second, there is the ephemeral character of recreation goals, where rationalization and the focus on positive aspects of an experience is prevalent. Ruddell and Gramann believe norm-interference is a natural extension of the goal-interference model of recreation conflict where social norms influence the social structure of settings and tolerance levels. Single and no-tolerance norms are less likely to result in conflict as compared with multiple tolerance norms; having at least two differing standards for appropriate behaviour (Whittaker and Shelby, 1988). Conflict resolution strategies are also more effective with single norm activation strategies (having greater consensus) than would multiple norm activation strategies (Ruddell and Gramann, 1991).

2.11 CONFLICT AS A SOCIAL INTERACTION PROCESS

A final theoretical concept of recreation conflict that should be included in this discussion is the theoretical framework found in environment and behaviour research. Owens (1985) in a

paper attempting to distinguish between conflict and crowding identifies crowding as a "transient social process experienced as an immediate reaction to prevailing conditions" (Owens, 1985:252). Crowding occurs when an individual cannot achieve desired levels of privacy resulting in the establishment of personalized defensible territories as a coping response intended to reconcile differences between achieved and desired states (Altman, 1975). Conflict on the other hand, as described from the environmental and behaviour perspective, is:

> a process of social interaction which is operationalized with the general motivational goal of eliminating environmental instability and restoring perceived equilibrium (Owens, 1985:251),

and

> is a cumulative process of social interaction which once established becomes an enduring psychological state guiding the behaviour of individuals and/or groups in their attempts to restore perceived equilibrium (Owens, 1985:252).

Owens suggests that there is a need for further research: to do longer term monitoring, study intensive use areas, tie in the notions of psychological needs and satisfactions which motivate recreation participation, investigate more closely the coping mechanisms at play with recreation conflict, and to study the nature of individual experience and personal characteristics that may influence conflict sensitivity. Owens' (1985) research differs from other approaches in that it looks at conflict as a cumulative process of social interaction.

2.12 HIKER-TRAIL BICYCLIST CONFLICT

To-date very few academic journal articles have been published concerned with the subject of conflict between hikers and trail bicyclists. Watson, Williams and Daigle (1991) have studied this issue in a case study of wilderness users in the Rattlesnake National Recreation Area (NRA) in Montana. The results of their research indicate: (1) slight differences between hiker and cyclist in regard to relationship to the resource; (2) some differences in the mode in which an individual experiences the environment; (3) a greater attachment of place for cyclists; (4) an asymmetrical conflict relationship between hikers and bicyclists with some hikers expressing

interference of enjoyment to bicyclists expressed as "traveling too fast" and "not being courteous to hikers"; and, (5) significant difference between the perceived similarities of the two groups. Wilderness hikers were the least likely to agree that the two groups were similar, while wilderness bicyclists were reported to be the most likely to agree to group similarity. Items of where perceived differences were found include: types of places they live, lifestyles, types of jobs they have, levels of education, and, feelings about the values of the area. "On most of these items the perceptions held by the wilderness bicyclist are very accurate" (Watson, Williams and Daigle, 1991:69) as compared with the study's results. Bicyclists had the most realistic view, as compared with hikers, of the behaviours and values of wilderness users. This case study provides a useful initial reference point to identify the issue(s) associated with trail bicycling and subsequent recreation conflict.

2.13 UNIQUE ACTIVITY - UNIQUE EXPERIENCE

The majority of recreation conflict studies have been concerned with contrasting the differences of perceptions, attitudes, and expectations between non-motorized and motorized activities such as cross-country skiers and snowmobilers, and, canoeists and motorboaters. Jackson (1989:129), while summarizing conflict literature, identifies a number of common features of conflict between incompatible activities including :

> (That) the affected recreationists are most commonly those who participate in passive, appreciative, and self-propelled forms of recreation, whereas those who are perceived to cause the problem are the more active, faster, mechanized,and non-self-propelled types of recreationists.

The 'noise of machines' is also cited as another common element that negatively affects the quality of the recreation experience. Although the activity of trail bicycling clearly requires the use of a machine, the mountain bike, it is not motorized and is a quiet self-propelled activity. Therefore it becomes difficult to place trail bicycling in this literature and in terms of the technology

dimension discussed earlier. The traditional motorized-non-motorized literature becomes problematic when applied to hybrid activities such trail bicycling. In essence, trail bicycling does not conform easily to the traditional dichotomy of mechanized vs non-mechanized recreation. More information is required on the experiences and behaviour of trail bicycling to apply theories of conflict to this activity.

2.14 RECREATION MANAGEMENT OF NATURAL AREAS

From an applied perspective , the reason for conducting most if not all of the research mentioned to this point is to enable resource managers to develop and implement plans to obtain their agency's mandate. Park managers are no longer just concerned with the natural environment but must be concerned with multidimentional factors, including providing for recreation and the interaction of the natural, the social and the management environments. This section will briefly review a number of management practices/frameworks that may be applied to the issue of trail/recreation conflict in a national park setting.

2.14.1 Recreation Opportunity Spectrum

The Recreation Opportunity Spectrum or ROS was initiated by the U.S. Forest Service, to help manage natural areas for various recreation opportunities. The ROS framework is based on the degree of development and access of a particular area or setting ranging from modern and developed to primitive and undeveloped. Clark and Stankey (1989:128) explain the premise of the ROS:

> We define a recreation opportunity setting as the combination of physical, biological, social, and managerial conditions that give value to a place. Thus, an opportunity includes qualities provided by nature (vegetation, landscape, topography, scenery), qualities associated with recreational use (levels and types of use), and conditions provided by management (developments, roads, regulations). By combining variations of these qualities and conditions, management can provide a variety of opportunities for recreationalists.

> Recreation opportunity settings imply a choice for recreationalists; people must be aware of the opportunities, and the opportunities must be comprise of conditions desired by recreationalists. Thus, opportunities are a function of user preference and a product of management actions designed to provide desired settings and to make people aware of their existence.

Two points should be made that are implied in the ROS. First, recreationalists desire diversity and quality in recreational settings to meet various needs and desired opportunities. Secondly, the opportunities provided by the resource agency is not the end in itself, but will provide the opportunity for various kinds of experiences (Clark and Stankey, 1989). Managers cannot be responsible for providing " an experience". However, by using the ROS, managers can provide the opportunity (an objective and systematic setting) for participants to choose and achieve their own (a subjective state) preferred experience (Clark and Stankey, 1989;1979; Driver, Brown, Stankey, and Gregoire,1987). The ROS is considered a management tool for controlling conflict by overtly defining and displaying the conditions of settings (natural, social and managerial) there by letting participants develop expectations of these settings and at the same time the ROS approach provides the basis for also spatially separating different users according to the opportunities for desired experiences (Daniels and Krannich, 1990).

The ROS is a systematic framework for looking at the actual distribution of opportunities and a logical procedure for assessing possible management action and not a prescribed formula for providing outdoor recreation opportunities (Clark and Stankey, 1989). A similar framework for tourism development in natural resource settings has also been developed; the Tourism Opportunity Spectrum (Butler and Waldbrook, 1991). The CPS is currently reconsidering the use of the ROS or a system similar to it for managing parks in terms of providing recreation opportunities.

An important aspect of the ROS system is it's incorporation of recreation opportunity as a function of both recreation activity and the physical setting (Driver, Brown, Stankey and Gregoire, 1984 in Daniels and Drannich, 1990). This system works well to facilitate the goal incompatibilities

of distictive activities such as those that require roads or use of motor vehicles and those that do not. However, since this system spatially separates participants according to activities, the subtle differences of managing for experiences are lost. This traditional park approach where managers are using land use planning to eliminate or reduce recreation conflict will not address the social issues associated with the conflict between hikers and bicyclists.

2.14.2 Visitor Activity Management Process

The Canadian Parks Service, CPS, has initiated and developed the Visitor Activity Management Process or VAMP. Using service planning as the basis of this management tool, this approach makes use of " a marketing philosophy in which the park visitor's interests and satisfaction are considered in parallel with the park's conservation mandate" (Environment Canada, Parks, 1987:3). VAMP represents an awareness by Parks "towards an approach that integrates social, economic and environmental issues in its planning and management activities" (Graham, 1989:281).

Service planning uses a visitor information base which is initially developed from "existing knowledge, existing studies and staff expertise" (Environment Canada, Parks, 1987:4). The amount of detail and comprehensiveness of each plan is dependent on the size of the park (and existing data base) and the overall park priority for developing a master service plan. The intent of a service plan using VAMP is to include input from visitors and integrate the activity needs of existing and potential park visitors with the natural resource management plan in creating an overall more comprehensive park system plan. Unfortunately, the data base of trail bicycling is rather sparse. Existing information consists mainly of preliminary activity papers (conducted in the early eighties) submitted to the CPS and staff expertise.

VAMP requires data on appropriate visitor activities. Input includes a "Preliminary Visitor Activity Evaluation" and an "Approved Visitor Activity Concept" document as apart of the park management process. The data required for the as mentioned studies includes an examination of "who the park visitors are, what they do, why they come to the park, and what the park offers to them, as well as identifying what markets the park could serve." (1987:10). The VAMP data base looks at each visitor activity group as an "activity, needs and expectations of different user groups recorded in the form of visitor activity group profiles. Information from visitor statistics and other studies on visitor use, market characteristics, demand and target groups should be captured by these profiles" (1987:23). The knowledge of park staff is also considered of utmost importance to developing activity profiles. Not all activities are profiled but only a selected few which are deemed important to park managers and are grouped to have a population large enough to form a significant proportion of park visitors. It is important to note that decisions from VAMP are based on the visitor activities and not on opportunities and experiences. Tayler (1989:236) explains this deliberate move to address only the activity:

> The most important decision in the early 1980's was to build the process by concentration upon visitor activities instead of opportunities and experiences. The rationale was that, within our organization, there was little support for decisions based upon very soft opportunity or experience. Managers could relate to "what people do" or visitor activities. However, the grand scheme was to ensure that the decisions would eventually be made upon an opportunity/experience base.

Trail bicycling has had an activity profile written for the VAMP process according to the stated assessment procedure. The extensive elaboration of details in this section are to unveil the possible pitfalls of this current CPS management practice. The VAMP process is limited in understanding the 'whys' of the trail biycling issues due to a superficial 'activity' emphasised profile of this recreation experience. The fact that data relating to trail bicycling was collected during the initial years of this activity in the parks, should also be considered a factor in determining the reliability of the base data.

2.14.3 Visitor Management

Visitor management of natural resource areas has become a recognized concern for resource management agencies. Researches have taken different approaches when dealing with the numerous problems associated with providing for leisure experience opportunities while protecting the natural resource base. Management techniques that are being used, besides the already mentioned ROS and VAMP, includes: zoning, marketing (Frisby, 1989; O'Leary, 1989), Park Use-Related Data System or PURDS (Grimm and Beaman, 1989), onsite registration/questionnaires (Knopf and Lime, 1984), written brochures and personalized information contacts (Roggonbuck and Watson, 1986), the carrying capacity alternatives of Visitor Impact Management or VIM (Graefe, 1989) and Limits of Acceptable Change or LAC (Knopf, 1989; McCool, 1989, Stankey et al, 1985). VIM and LAC are site specific management tools and may be incorporated into the more comprehensive planning and management frameworks of the ROS and VAMP (Graefe, 1989). Some of these management strategies may be used to manage the issues that arise from trail bicycling and the possiblities of recreation conflict.

2.14.4 Persuasive Communication

The above mentioned management techniques involve using conventional managerial processes where directly or indirectly a land use approach is used. In conventional approaches, social impacts, such as conflicts, are controlled through manipulating the natural resource and physically separating recreation activities. Persuasive communication is a visitor conflict management tool which is unlike the other mentioned strategies. Instead, management is not restricted to manipulate the natural resource (facilities) or with the activities, but with modifying the participant's behaviour. Persuasive communication is a lighthanded or subtle visitor management strategy which involves three routes (Roggenbuck, 1992:193):

> [1] behavior change strategies of applied behavior analysis (i.e., accomplish desired behavior changes through behavior prompts, manipulation of the environment, rewarding appropriate behavior or punishing inappropriate behavior); [2] the central or cognitive route (i.e., high attention by the recipient of the persuasive message to message content, careful thought or elaboration of the message content, and integration of the message content into existing belief systems); and [3] the peripheral route (i.e., belief, attitude and behavior change strategies that place little emphasis upon integration of message arguments into existing cognitive structures, but instead emphasize such peripherial issues as source credibility). Appropriate applications of the three strategies depend on the type of park, the goals of recreationists, and the purposes of the persuasive attempt.

Persuasive communication, like the ROS is not a panacea for recreation conflict problems. However, this management strategy has been found to be effective for developing a sensitive and holitic land ethic, effective in altering travel routes within wilderness areas and changing negative behaviors such as littering and vandalism (Roggenbuck, 1992). A discussion of specific persuasive strategies is included in the analysis chapter of this thesis.

In a chapter on tourism and resource management, O'Leary (1989) identifies the main problem of visitor management as being the lack of understanding of the park visitor. Reasons for this ignorance includes the lack of time to collect the data and the limited expertise of field staff to gather the required information. Budget restraints and poor communication between resource managers have also been cited as reasons for existing poor monitoring systems (Watson, 1983) and for limited research studies (Cole, 1989). In addition, the lack of visitor data (information of visitor use) has led to the problematic nature of implementing the ROS (O'Leary, 1989). Common sense would suggest that it would be difficult to manage for the quality experiences which visitors seek, in any setting, without knowledge of recreation participation, motivation and how visitors perceive important elements of the places they visit (O'Leary, 1989; Fege, McCarthy-Ryan, Munson and Schreyer,1989). Managers, therefore need more information on park users and also need to provide better information on the opportunities available to these same park users.

Cole, Petersen and Lucas (1987) have developed a manager's guide to deal with common problems and potential solutions in managing wilderness recreation use. Common management problems are listed and then a variety of strategies and tactics are given and explained for specific recreation problems. Under the heading of visitor conflict, Cole et al, (1987) contend that there are potentially three strategies in dealing with this issue: Modify the location of use within problem areas, modify type of use and visitor behavior, and, modify visitor expectations. These strategies will be expanded upon in the discussion section of this document.

2.15 TRAIL BICYCLE MANAGEMENT

Few studies have directly focused on the management implications of trail bicycling on public lands and the ensuing conflicts with other trail users. The Bicycle Federation of America, Inc., has published a manager's guide for dealing with the introduction of mountain bikes on public land. This document, written from a bicyclist's perspective, has compiled detailed and comprehensive information on: identifying the issues, suggestions for multiple use, public safety considerations, environmental impacts, user conflict, developing a policy position, trail review and design, and, user education, enforcement and safety programs (Keller, 1990). Reviewing this information has given this researcher a comprehensive appreciation of the state of the art on the issues in the U.S. situation and considerable bench mark information concerning, the values and expectations of trail users, arguments against mountain bikes, user demographics and possible solutions through management techniques. Although this document was written for the United States situation, it will be used and reviewed for possible solutions and recommendations for the trail conflict issue in Banff National Park in the discussion section of this study.

A similar document developed in the Canadian context, is the proceedings for the Mountain Biking Symposium (Outdoor Recreation Council of British Columbia, 1990) held in

Vancouver, B.C. The proceedings gave views from a number of perspectives including a parks employee, an avid mountain bike racer and advocate, and, a member from the Horse Council of B.C. . Transcripts of a panel discussion also gave the views of resource managers from the B.C. Ministry of Parks, Ministry of Forests, planners from Vancouver and Seattle and the CPS. The results of the symposium , in the form of an action plan, recommend that conflict between traditional trail users and trail bicyclists can be managed through land use practices (appropriate trail selection, trail standards, activity separation in time and space, and enforcement of regulations) better communication between users and managers, and, recommend research on experience expectations and preferences.

Canadian government agencies have conducted research on trail bicycling to manage trail bicycling opportunities and develop appropriate policies and management decisions. The CPS, during early policy development, commissioned papers to provide preliminary information on the nature of this new activity and the management implications this activity would have on the CPS (Bronson, 1985; Gadd, 1982, 1985; Hollingshead, 1984; IBI Group, 1984; Parks Canada,1984; Sawyer, 1988). The majority of these papers simply provide descriptions of: the required equipment; length of trips; types of trails used; theoretical impacts with hikers, equestrian users and wildlife; possible tourism markets; possible environmental impacts; and possible management plans. Bronson (1985) expands on this information with a brief description of trail bicycling experiences and theoretical user conflicts. Sawyer's study (1988) was the first of it's kind in Alberta to collect data in the field and then make recommendations for the management of this activity. His study used self administrated questionnaires to determine: current levels of use; trail bicyclist demographics, experiences, attitudes, and requirements; attitudes of traditional trail users; environmental impacts; and, management recommendations. The results of this study provide quantitative data on variables such as: (1) the average and total number of meetings between conventional trail users and trail bicycles, (2) the percentage of negative experiences of conventional trail users, (3) the percentage of warnings given by approaching trail bicyclists, (4)

percentage of prefered types of warning, and ((5) changes in the quality of the conventional trail user experience. However, Sawyer's study has two main limitations. The first limitation relates to the timing of the research. The questionnarire was submitted during August, 1986, a time when participation in trail bicycling was still limited to a select group of people and concepts of 'responsible riding' were not yet developed. As a result, the findings reflect the perceptions and attitudes of park participants during the infancy of trail bicycling in the Canadian context. Second, the data collection, using a self administered questionnaire, has limitations of focusing on issues that are deemed important by the researcher which may influence the results of the study.

The Parks Branch of Saskatchewan Parks and Renewable Resources (1990) has also completed a study of mountain bikes on park lands. This study synthesized data from Canadian and American contexts using "surveys, studies, interviews, statistics, articles and agency policies" (Potter, 1990:1). This study was organized from an activity view point and discusses the issues from the 'mountain bike' perspective and not as a trail bicycling experience. The study identifies a number of hikers' attitudes toward bikers: (1) the wilderness is no place for a mechanical device, (2) the improper ease and quickness of bikers ,and, (3) and the reckless and rowdy behaviors of some bike users. A number of important issues are also raised in this report including the need for education programs on: (1) policy, (2) trail etiquette and safety with other users, (3) minimizing environmental impact, (4) preparedness for medical and mechanical problems and (5) how to deal with bear conflicts. However, this study has the limitation that it is a continuation of the activity approach to research and management and does not address the experiential aspect(s) of outdoor recreation.

Management of mountain bikes and the potential for trail conflicts is also found in a variety of unpublished studies, organiztions' newsletters and popular magazines. This literature, although not academic, does reflect the concerns of trail users and influences the perceptions and attitudes of it's readers. Descriptions of the activity such as "like four-wheeling without a

motor- or like hiking on wheels" (Grost 1989) are commonly found. The initial studies were concerned with environmental impacts, especially soil erosion, social perceptions, and, safety hazards (Coello, 1989; Ford, 1989; Grost,1989; Santa Barbara Ranger District, 1987). Most recent articles have revealed that the conflict issue (in the United States) is no longer just a few outdoor groups not getting along but has implications of national precedent-setting and legal actions between cyclists and the U.S. government (Martin, 1992; Blumenthal, 1992).

2.16 CONFLICT SUMMARY

Conflict between recreation users has gained greater attention with the increase of behavioural studies concerned with user satisfaction. The limitations of the activity approach have been identified and suggest the need to investigate the experiences of participants to understand the concepts of recreation choice and satisfaction. Conflict research , although limited to certain activities, has started to test the theoretical perspectives of recreation conflict, as developed by Jacob and Schreyer (1980), in order to apply theory to field applications. Nevertheless, the specific issues of trail bicycling and perceived trail conflicts have only begun to be published in academic journals (Watson, Williams and Daigle, 1991) while most discussion of this topic is still found in popular magazines, policy information papers and other non-academic materials. The literature however does reveal an omission in the study of conflict. Information on the experiential nature of trail bicycling, and the current attitudes of other trail users are required for an academic discussion and subsequent applications for managing the opportunity of the trail bicycle experience in national parks.

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

Each researcher has the dilemma of selecting an appropriate methodological strategy for data collection. The choice typically is between some version of the positivist paradigm using a quantitative approach and the interpretive paradigm using a qualitative approach. Choosing one methodology over another is an exercise of selecting approaches, methods, and techniques which are appropriate to the specific research problems and subproblems being addressed. The correct methodological choice is dependent upon the purpose of the research. In this study, a methodology was required to explore the experiential nature of trail bicycling and to explore and explain the "conflict" attitudes which exist between this group of recent park users and the more traditional park users as represented by hikers. In order to explain this study's choice of the interpretive paradigm using participant observations and interview techniques, the first section of this chapter will briefly discuss the two research paradigms, the choice of a qualitative approach, and reasons for using participant observation and interview techniques. The second section of this chapter will provide a detailed description of the research design and procedures including the setting, access and data analysis techniques used in this study.

3.1 SECTION ONE RESEARCH CHOICES

3.1.1 Choosing a Paradigm

> Once research questions are developed, the researcher will need to find the best methods to use to discover and interpret data (Henderson, 1991:7).

As mentioned in the introduction, there are two main paradigms predominant in the social sciences: positivism and the interpretive paradigm. A paradigm is the fundamental model or philosophy of knowledge that is used to organize, understand, and chose among different kinds of information. Positivism has been the dominant paradigm in social science, and has been based on the premise that research and ultimately knowledge can be obtained objectively. For example, the detached and systematic observation of the behaviours of objects which are, in principle, observable by anyone. This research involves using existing theories and testing to verify facts and causal relationships. A positivist has certain assumptions about reality which, according to Henderson (1991:23), includes:

1. External, separated, categorized, and isolated into independent parts which form a whole.
2. Approached through deduction and *a priori* (preestablished) theory.
3. Based on mechanistic processes that focus on idiographic (complete) understanding of a particular phenomena and rational cause and effect.
4. Objective and value-free.

Henderson (1991:24) also describes the aims of the positivist:

> The positivist strives for explanation, prediction, and control by dividing a phenomenon into parts that can be isolated and categorized. The emphases in positivism on the mechanistic processes for explaining social behavior have been on rigor as addressed in reliability and validity, the measurement of manifest behavior, *a priori* hypothesis testing, operationalization of concepts and procedures, verification of established *a priori* theory, generalization, scientific protocols, cause and effect, data reduction, standardization, and facts. ... (also) the researcher strives to remain objective, value-free, and apart from the subjects of the research.

The positivist believes that the procedures and concepts used in the natural sciences are applicable to the social science context. This is accomplished by defining and measuring human as object behaviour and assigning precise numerical scores. Analysis of this data involves statistical manipulations which result in causal explanations with statistical probability. The results

of one study therefore could be generalized and applied to other studies with similar procedures and concepts.

The positivist paradigm is the predominant view used in both human and natural sciences, and the research in the recreation, parks and leisure field is no exception. However, the positivist's world view is not without it's critics. An opposite world view, the interpretive paradigm, exists which basically rejects the foundations of positivism and believes the positivistic view becomes problematic when researching social behaviour. The dissatisfaction with positivism relates precisely to it dehumanizing (ie. objectifying) approach to researching the complexities of human behaviour. "Human life... is too complex to be reduced to a set of variables regressing to a mean" (Stigliano, 1986:34). The interpretive paradigm believes a positivist approach is less suited for studying human behaviour because the complexity and essence of what it is to be human is lost when a person is objectified and reduced to a set of isolated variables.

The interpretive paradigm, initiated from the sociological and anthropological disciplines, is gaining increasing acceptance, precisely because of its focus on human experience as a total phenomenon where all thoughts, perceptions and feelings about lived experiences are not compartmentalized but are considered together with each other and with observable behaviour, in the context of the total person. Through descriptions of experience, humans are studied as complete phenomena in authentic and natural settings. Interpretive paradigms also allow research to be open to unexpected information which would most likely be overlooked in research that confines itself to a specific hypothesis. According to Henderson (1991:23), the interpretive social scientist, as contrasted with the positivist, also assumes certain beliefs about reality which include:

1) Multiple realities, relationships, connectedness, wholeness and inclusiveness.
2) An emphasis on induction and grounded (emerging within a context) theory.

3) Organic (contextual) processes that focus on meaning.
4) Subjectivity and perspectivity.

Unlike the cause and effect nature of positivism, the interpretive social scientist sees integrated elements of a interactive social system where the factors are constantly influencing each other. In the interpretive paradigm researchers do not distance themselves from the researched subjects as with the positivist paradigm, but intentionally share conversations and experiences and may even become a part of a subculture or community. This allows the researcher to uncover and understand the participants' own perspectives, since human behaviour is a product of how people define their world (Taylor and Bogdan, 1984). It becomes important in this paradigm to investigate the participant's point of view and therefore choose methods that would allow the researcher entry into the "reality" of the people and the phenomenon being studied.

Choosing a research paradigm is a prerequisite for choosing the specific research approach and the methods for collecting the research data. The choice should be based on the types of discoveries the researcher wants to make. The positivist researcher will want to be rationalistic, separating social behaviours and phenomena into discrete categories in order to later generalize about the causal nature of the phenomena. The positivist must measure (directly or indirectly) social "variables" in order to explain the process of the one external "real" world. The interpretive paradigm believes that the "real" world is within each person and is created from the individual's own perspective and according to life experience(s). Each person potentially lives a different reality, the product of cumulatively different experiences, and will therefore react differently, through actions and the meanings attached to these actions, according to this reality. In other words, the actions of a person (or human behaviour) have meaning (is a motive) to the individual performing the action. The role of the interpretive social researcher is then to discover and inductively explain this reality (the motives for the person's actions) as multiple, divergent and inter-related concepts (Henderson, 1991).

3.1.2 Selecting A Methodology

After a research paradigm has been selected, deciding on how the research is to be conducted or what specific approach will be used is the next step in the research process. Not unlike the choice of a paradigm, the research approach is selected according to the kind of information that is required to answer the research question(s). Methodological appropriateness as opposed to methodological orthodoxy is the primary criterion for judging methodological quality (Patton, 1990). The reason for selecting one methodology, or a method variation, or a combination of methodologies, is dependent upon a sensible decision "given the purpose of the inquiry, the questions being investigated, and the resources available " (Patton 1990;39).

The primary goal of this research was to examine the behaviours of trail bicyclists. The goal was to examine "slices of life", the current experiences and personal responses of trail users, from their own point of view. Developing theories from, or grounded in, the context of the situation may reveal new information that would be beneficial when managing recreation conflicts. An interpretive paradigm would allow new information to be derived from the grounded data. Qualitative researchers use an emerging research design to discover perspectives of the ongoing phenomena. The researcher is the research instrument collecting words and ultimately explanations of everyday life. Methods found within the qualitative discipline include phenomenology, ethnography and description.

Current national park and outdoor recreation research such as Rollins' (1989,1990,1991) studies of user satisfaction in Kootenay and Yoho National Parks exemplifies the continued use of a quantitative approach. He uses a mail questionnaire survey, using bivariant scales and statistical analysis to measure the attitudes and opinions of park users. Rollins (1991;10) explains the reasons for using a mail questionnaire:

> A major advantage of a mail questionnaire is that there is minimum inconvenience to the visitor, since they can complete the questionnaire at a time and a place that is convenient to them, rather than while they are enjoying themselves in the park. Also, a mail questionnaire avoids the issue of interviewer bias, created if a subject's responses are influenced by the appearance and manner of the interviewer.

However, other researchers are recognizing a need for varied research approaches. In recreation and leisure studies, in general, most studies have been found to use survey methodologies and mostly cross-sectional, quantitative, atheoretical and ahistorical data collection strategies (Godbey 1989). The dominance of survey techniques and statistical analysis has limited the range of focus and confined the body of knowledge within recreation and leisure research (Jackson and Burton 1989). In other words, knowledge in this field has been limited by the parameters set by the continued use of established research methods. Henderson (1991) also recommends a change for alternative ways of thinking from the positivistic past, where statistics and simplified models do not provide explanations of the complexities of leisure. Jackson and Burton (1989:635) make recommendations for varied approaches:

> No matter what may be our own particular disciplinary training, we should strive to make ourselves-and, even more important, our research students- familiar with methodological approaches to the study of leisure beyond the confines of our own disciplines. We need to gain an understanding of (and, yes, even a tolerance for) methods of accumulating knowledge that are not empirical and quantitative in character: the philosophical discourse ... phenomenology; historiography; ethnography; and, not least, theorizing.

Henderson (1991:16) agrees; "An emerging paradigm that focuses on interpretive views and the qualitative approach may be a useful means for addressing some of the questions left unanswered by past recreation, park and leisure research".

3.1.3 The Preferred Methods

Selecting a qualitative approach entails using research methods that will allow the researcher to observe and obtain first hand accounts of the people being studied. Cultural anthropology has used ethnography; or the practice of conducting field work by living with a culture (ranging from primitive jungle tribes to the street people of a western metropolis), interviewing the inhabitants, observing their daily routine, and simply becoming as much as possible a part of their lives and their communities. Spradley (1980:3) defines ethnography "as the work of describing a culture" whose central aim "is to understand another way of life from the native point of view ". Since culture is comprised of human experience: what people do, what people know, and the things people make and use, an ethnographer can understand a people by focusing on the meanings they attribute to actions (Spradley, 1980:5):

> ...in every society people make constant use of these complex meaning systems to organize their behavior, to understand themselves and others, and to make sense out of the world in which they live. These systems of meanings constitute their culture; ethnography always implies a theory of culture.

Ethnographies, as used by anthropologists, are only one type of qualitative method. Other often overlapping methods include: direct observation, field study, participant observation, case studies, interviewing, life histories, document analysis, questionnaires and surveys, and focus group interviews. Henderson (1991) explains that these qualitative methods have common features such as: the presence of emergent designs, grounded theory, the use of words(rather than numbers), the idea of verstehen (the inner perspective), and a natural environment. Combinations of these methods can also be used, to verify findings; this is called triangulation. Each of these methods have their advantages and disadvantages, but it is beyond the scope of this discussion to discuss these finer points. However, there is a need to explain why the specific methods, or more appropriately variations of the methods of participant observation (ethnography) and depth interviews were chosen for this study.

Participant observation or ethnography as described earlier in this section by Spradley provides a unique look at a social issue; from the participants' perspective. The intent of this study was to observe and understand trail users, with the prime focus on trail bicyclists and a secondary focus on trail hikers. This research process began with participant observation and evolved to include depth interviews to understand what was being observed and to give depth to the experience of a trail activity. The specific details of this study's methods will be discussed in the next section of this chapter. As a participant observer the researcher attempted to share the "realities" of a national park resident and tourist and more specifically of a member of the recreation subculture; trail users. Henderson (1991:53) explains the assumptions of participant observation and field work where: "one can share in the subject's world, directly participate in the subject's symbolic world, and take a role in the subject's interaction". The researcher has to balance the need to be immersed in the culture in order to understand the participants (from their point of view), with a more detached observer's role which sees how the participants are products of broader social processes. The advantages of participant observation are the depth of understanding, flexibility, relative inexpensiveness, and superior validity. Whyte describes how research can learn from the experience of the field (1984:26) :

> Participant observation offers the advantage of serendipity: significant discoveries that were unanticipated. In contrast to the survey, which is planned on the basis of what the researcher expect to find, participant observation opens up possibilities for encountering the completely unexpected phenomenon that may be more significant than anything the field worker could have foreseen, suggesting important hypotheses worthy of further study.

Disadvantages of participant observation include suitability for certain problems, "providing suggestive rather than definitive conclusions, having questionable reliability, and lacking generalization" (Henderson, 1991:56). These methodological problems did not appear to conflict nor interfere with the goals of this study. On a topic such as recreation conflict, where there are obviously opposing views, definitive conclusions are not possible. The issue of reliability was

addressed in this research by using three methods of data collection: participant observation, heuristic inquiry, and content analysis. This research will not claim generalizability but will depict the situation in this case study.

The field work of participant observation gathers data from a number of data sources. This research used field notes, tape recordings, and documents, as multiple methods of collecting data on the phenomenon of trail bicycling and trail conflict. Direct observation yielded most of the data sources. Triangulation, collecting data from different methods: participant observation, from content analysis of magazines, and from interviews, gave this research additional depth and richer data. Observations and informal interviews were the primary means of data collection. Researchers using these techniques require practice and time to develop appropriate skills. Observations are extremely valuable to the participant observer and care is required to record the observations as accurately and thoroughly as possible. Contextual and behavioural details that usually escape conscious awareness need to be acknowledged and recorded to "allow the reader to actually enter the situation and understand what was happening based on detailed descriptions" (Henderson, 1991:60).

More in-depth interviews were conducted to confirm the directly observed data, field observations and conversations, and to help the researcher evolve theories. Since the perceptions and intentions of participants are not always visible through observation, in-depth interviews were conducted to link behaviour with feelings and motives. Open ended questions were used to solicit answers and issues that were important for the person answering the question. Henderson (1991:73) would categorize the type of interview in this study as a mixture of the informal conversational interview "in which the questions emerge from the immediate context and are asked in the natural course of the interaction" and the interview guide approach which uses "topics and issues to be covered but does not specify any particular way that the questions should be asked". (1991:73). Due to time restraints and ethical considerations of

intruding on a person's leisure time, the researcher asked open ended questions, as a natural extension of the conversation, with specific topics and issues in mind. The person being interviewed would reveal whether the topics were relevant and the issues important to them from the extent and way they answered the questions. If other issues were deemed more important than the ones identified by the researcher, probing questions were used to develop this person's perceptions further. The foundation for asking questions was to elicit information from the trail participant by guiding them to topic areas that are possibly relevant to the conflict issues , while not pushing them to answer in a way that might go beyond their feelings and priorities.

To a lesser extent information was gathered from print material; where content analysis of newspapers and magazines, and from park materials are used to help develop the context of the bicycle/conflict issues. Finally, semi-structured interviews were also held with CPS staff from the regional office in Calgary, and with park staff in Banff. The information from park staff helps to describe the management practices of the CPS and current managerial attitudes, therefore one aspect of the context that may influence how trail participants are likely to experience trail bicycling and encounter conflict .

3.2 SECTION TWO METHODS AND STRATEGIES

This section details the specific research methods and strategies used in this study. It is important to describe the techniques and the rational for research choices to set the context in which the data was gathered in order to give the reader the opportunity to identify research biases and limitations.

3.2.1 The Settings

Four separate settings were used to collect data. The primary setting was Banff National Park, with the secondary settings of Jasper National Park, Edmonton and Calgary. The National parks were selected as the physical settings for the activities of trail bicycling and hiking. These two parks were selected because of the potential for observing bicycling and hiking and the possibility of conflicts. The characteristics that made the National Park settings a potential location for conflicts include: larger populations using these parks because of relatively close proximity to urban areas, and the possible attachment people have for these well known travel destinations. Although Kananaskis Park and Country would also fall into this category and are also becoming popular locations for trail bicycling, they are not designated National Parks and therefore are not governed by the same policies and regulations. An assumption of this study is that people have certain expectations of National Parks which will motivate participation in activities, and will conversely produce reactions to activities that are not considered appropriate for these locations. Locations not designated a National Park may give rise to different expectations, and therefore are not included in this study.

The urban locations of Edmonton and Calgary were easily accessible settings to make contact with trail users. Calgary was primarily the location for contacting the regional office for the CPS and for a limited number of informal interviews. Edmonton was the location for most non-park located interviews. A prerequisite for all interviews was that those being interviewed had participated in the trail activities of hiking and/or bicycling in either of the two mentioned National Parks. Each of these settings will be discussed further to explain the context of the experiences and possible influences on the park participants.

JASPER NATIONAL PARK

Access into the community of Jasper, during the summer of 1989, was accomplished through a friend who has been a Jasper resident for a number of years. Jasper, Alberta, is the only town site found within Jasper National Park. This park is bordered by Banff National Park to the south and is one of four national parks that together forms the Canadian Rocky Mountain Parks. Jasper's seasonal residents are quite transient. The town attracts mostly younger people (students from across Canada) to work in the restaurants, hotels/motels, the Canadian Park Service (CPS), Canadian National Railroad, and other tourist facilities during the summer months. As a seasonal employee and as a friend of a Jasper resident, the researcher met many local people through social events (Jasper/Banff relay race, dances, a Tuesday night slow-pitch league), and word of mouth referrals. Other locals as well as tourists were encountered in the course of a job as a mountain bike guide.

As a mountain bike guide, the researcher administered bicycle rentals and conducted backcountry trail rides for paying customers. This job allowed the researcher to meet tourists from all over the world and probe into their attitudes and knowledge about parks in general and trail experiences more specifically. In addition to personalizing each bicycle tour according to the participant's skill level, physical conditioning and time parameters, an interpretive program was included to meet the tourist's interests and as a CPS prerequisite for conducting backcountry bicycle tours. The time with tourists, riding on the trails, allowed the researcher to talk, in conversation style, (approximately for two hours) with the customers (approximately 50 to 60 for the summer) about their recreation goals and their attitudes towards Jasper, as a national park. It also permitted observations of their riding styles and behaviours with fellow bicyclists and other trail users.

Participant observation was the main source of data collection in the Jasper setting. The intent of collecting this data was to gain a better understanding of local and tourist perspectives of

trail use and leisure pursuits in general, and to gain a personal awareness/involvement with the new activity of trail bicycling/mountain biking. Participant observation techniques were studied during this time to enable the researcher to make observations of everyday life. (Spradley, 1979.1980; Jorgensen, 1989; Yin, 1984). Secondary data was sought from newspapers, popular magazines, CPS materials and other images found in the visual media. As a participant in the daily routine of this community, the researcher regularly asked open-ended questions as a part of a conversation (informal interview) and took every opportunity to participate/experience the leisure behaviour of Jasper locals in an attempt to understand their values, feelings and the meanings they give to the activities and experience of bicycling, hiking and other trail uses in the Jasper area. Day-use trail bicycle rides were the most common activity, which the researcher participated in, where trips would range from one and two hour rides near the town site to full day excursions to scenic destinations such as Snake Indian Falls. Day hikes and two day-use horse trips were also apart of this summer's experiences. Time was also spent at the Pyramid horse stable, with a local "cowboy" listening to his stories of eventful trail rides, conflicts with other horse users, hikers and bicyclists, getting an appreciation of equestrian ways, and assisting with fence building and unloading hay. Mental and written notes were made of specific and general observations of locals and tourists, as well as the researcher's personal observations and impressions as they emerged. The detail and depth of these notes were initially limited due to a preliminary yet growing knowledge of the participant observation strategy. Additional notes were later recorded after the Jasper experience to better describe the researcher's understanding of life experiences in the Jasper setting.

Prior to the Jasper experience, the researcher had a limited idea of trail bicycling and the potential for recreation conflict, therefore this setting developed a broader foundation of experience for thinking about trail bicycling and the associated issues of conflict. It should also be noted that prior to this summer (1989), except for the one contact person, Jasper and it's residents were relatively unfamiliar and new experiences for the researcher. This participant

observation gave an appreciation for some residents' lifestyles and for the importance given in this setting to 'quality' outdoor recreation. The setting also allowed for bicycle skill development and an appreciation of what the national parks can offer towards the trail bicycle activity. Although no recorded interviews were conducted; the Jasper experience was an important element in understanding the activity and experience of trail bicycling, a resident's and tourist's perspective of mountain bikes and trail bicycling and a general overview of trail conflict issues. This information was needed to understand future conversations and perceptions people held of trail conflicts.

EDMONTON - Outdoor Enthusiasts Talk

A modified approach to collecting data in Jasper had to be used in the Edmonton setting; a city of half a million people. Instead of gaining access to everyday life in a small tourist town, the Edmonton setting opened up the experiences of urban people who visit and work in an outdoor retail store, people who often travel to and participate in trail activities in Jasper and Banff National Parks. Participant observation was again a primary source of data collection. Conversations leading to discussions often took place with fellow employees at the outdoor store. Over the approximately two year period, as staff came and went, the different perspectives that different people held towards trail bicycling and conflict become evident. Casual conversations were also 'struck up' with customers and acquaintances who were told of the researcher's thesis topic and research interests. Conversations could last from fifteen minutes to approximately half an hour with customers, while discussions with staff sometimes continued over an eight hour shift. The type of questions and direction of the conversation varied and was dependent on the time, the knowledge, and the attitudes of the people being talked to. The interview selection process in both Jasper and Edmonton was based upon the snowballing notion; as the researcher become acquainted with people, and, if people with time and a concrete attitude towards trail conflicts were available, they were encouraged to converse with the researcher concerning their perspectives. Participants were selected who were able to express an opinion and give rich descriptions of their

trail experiences. The intent of the conversations was to explore the trail conflict phenomenon where:

> the point of phenomenological research is to borrow other peoples' experiences and their reflections in order to be better able to come to an understanding of the deeper meaning or significance of an aspect of human experience in the context of the whole experience (Van Manen 1984, 55).

Finally, in the Edmonton setting data was collected from more formalized interviews. As views and themes became apparent in the data, the researcher needed to validate and determine the generalizability of existing data. Open-ended questions and quasi-formalized interviews were conducted with various people and recorded in a field book to verify themes that have emerged. Interviews, ranging from one hour to multiple sessions of more than an hour each, were conducted with: a person who dislikes bicycles in the backcountry, a woman who started bicycling and backpacking in the past year, an outdoor educator who takes groups on backcountry field trips (using both hiking and bicycling) and three people who have a range in commitment and motivations towards trail bicycling and other outdoor pursuits. Finding different people who hold similar views does not imply generalizability, but does suggest that a belief is not isolated and unique but is shared by other people. The interviews, not unlike the participant observations, were used to gain a deeper and more nuanced perspective and reveal the experience of trail users and the possibilities of trail conflicts. Supplementary secondary sources were provided by the print medias of newspapers and magazines.

The Calgary setting, as a part of this study, is very limited and is worthy of only a secondary mention in the data collection. Two interviews were conducted with staff from the regional office of the CPS in Calgary, and two separate informal interviews were conducted with trail bicyclists who live in Calgary and are using Kananaskis Country instead of Banff National Park for the location to participate in their chosen activities.

BANFF NATIONAL PARK

The last setting in which data was collected, was Banff National Park. Banff National Park, Canada's oldest and most likely best known national park, is located in the Rocky Mountains of Alberta, approximately a hour's drive west of the city of Calgary. Participant observation was used to collect data but became less important than conversational interviews with trail users, park staff and local residents. Interviews gave the researcher the ability to probe further into the issues associated with trail bicycling and trail conflicts. The interviews used here followed the same techniques as for the Edmonton setting. People on the trails, at staging areas, and residents who were directed to the researcher by others became the focus of the interviews. Access to the CPS in this setting was accomplished with a letter of introduction by a research committee member, and, consequently interviews were conducted with park staff in the field and within the administration. Conversation-styled interviews were conducted with local residents (town site of Banff) in the bicycle business and with trail users out in the field. Less time was given in this setting for establishing rapport with the participants, therefore a consent/information form was used to explain this research project and address the issues of ethical research such as voluntary participation, participant identity confidentiality and research withdrawal (see appendix 1). A consent form was not used in the less formal interviews in the Jasper and Edmonton settings due to the possibilities of developing less than natural conditions for casual conversations and setting access. Use of the consent form was helpful to introduce the research topic to the people being interviewed. There did not appear to be any differences between people who read the consent form and those who did not, for most people who talked to the researcher were quite willing and voluntarily expressed their opinions.

The Banff interviews took place during the month of July, 1991. Trails were selected as possible interview locations by consulting with CPS trail brochures and with park staff at the Visitor

Services Centre for locations where bicyclists, hikers, and a mixture of the two activities could be found. This research was focused on the backcountry trail experience, therefore trails in the immediate area of the Banff town site were not selected. Trail selection was also affected by Banff's weather in 1991; a large snow accumulation during the past winter had caused some of the longer and more remote trails to be closed due to snow at higher elevations and in blocked passes. Interviews were conducted on weekends and throughout the week days during different hours of the day. No interviews took place at night in the backcountry. One weekend was devoted to a hiking only section of the park, where the researcher hiked in to a well used popular area and had conversations with fellow campers in the backcountry. While most interviews took place at either the trail head/parking lot or at the destination in the backcountry, attempts were made to talk with people along the trails. It was difficult to obtain in-depth interviews without using up some of the respondents' leisure time, therefore shorter conversations were not considered interviews but recorded as participant observations. A total of eight depth interviews were conducted, lasting more than an hour each. Individuals and groups were interviewed and were recorded as single event data. A family and an outdoor education group, as well as couples, were interviewed and recorded as a single identity when they expressed a common belief, as individuals when they expressed differences. One interview, with a long term Banff resident, took place in a coffee shop and not in the field. Data was recorded in a field note book and some were recorded on audio tape. Audio tapes were then transcribed into written form for later data analysis.

3.2.2 The Researcher

The data collection, analysis, and recording of this research was conducted by one person. The chosen interpretive paradigm is governed by few rules allowing for the possibilities of uncovering meaningful yet unanticipated conclusions (Henderson, 1991). However the subjectivity of interpretation is open to debate due to the number of perspectives that may be

used during observation and analysis. To validate the methods used and rationalize the reliability of personal observations of lived experience by the researcher, it is necessary to know a little bit about this person. Personal bias is a built-in aspect of an interpretive paradigm therefore, rather than denying a research bias being present, the researcher must acknowledge the type of bias inherent in the research.

> Interpretive social scientists acknowledge that it is virtually impossible to remain objective in doing research because so much interaction occurs between the researcher and those individuals being studied. The researcher as a human being is the instrument for data collection and values are admittedly a part of the analysis (Henderson, 1991:25).

The following section gives a descriptive but brief account of the researcher's experiences and knowledge relevant to the researched area.

The subject area of trail bicycling and recreation conflict developed from a recreational interest in the outdoors in general. Buying a mountain bike to commute to school opened up new recreational opportunities in addition to previous experiences with hiking, backpacking and a wide variety of outdoor pursuits. The researcher would be a self confessed generalist; with outdoor interests in a variety of activities without specializing in any one particular activity. The intensity of participation would also be considered "recreational" since there are no aspirations of becoming an expert or competitor in the sporting side of outdoor activities. Knowledge of outdoor activities, parks, and related areas would be considered extensive, a product of post-secondary education in Forest Technology and a degree in Recreation Administration, as well as the long-standing recreational involvement outlined above. The researcher's employment history is also extensive with various jobs in the parks and recreation field ranging from park ranger to developing urban recreation programs for "tiny tots" and the mentally challenged. The main point of this short section is to give the reader the impression that the researcher is very much familiar with outdoor recreation, and with the policy dimensions of program provision and participation. Providing outdoor experiences that are appropriate for a specific area (especially in national parks) would be

one motivation for conducting this research. There is no hidden agenda, in this study, to promote trail bicycling because of personal interests. The researcher is biased towards the protection mandate of national parks and allowing only those activities that are conducive to enjoying a natural if not wilderness setting. Although prior to this research study, the researcher's experience has been with non-bicycle activities, there was a conscious open-mindedness towards trail bicycling.

3.2.3 Ethical Research Considerations

All participants, anyone who has met the researcher in the past three years and who have had conversations concerning hiking, bicycling and/or trail conflicts, were subject to being recorded as a phenomenon participant. All participants' names are kept strictly confidential and may be changed slightly to protect their identity. The researcher was aware of possibilities of leisure intrusion (identified earlier in the work of Rollins) and tried to adapt and be flexible to the participant's needs and time limitations. Conversations were therefore conducted as participants prepared for trips or as they prepared to leave the park setting. Some interviews took place in the backcountry at campsites or along the trail as participants rested. If a person appeared hurried or unapproachable no attempts were made to make them uncomfortable by contacting them. The researcher attempted to keep his own opinions and research findings to himself until the participant had established his/her point of view. Most people were interested in hearing the researcher's views and how other people saw the issues. The researcher was overt in his graduate student identity when asked by the participant and when questioning became more than simple conversation. The researcher did not contrive any 'conflict' situations such as playing the roles of a 'bad' or 'inconsiderate' hiker or bicyclist to test the reactions of fellow trail users. The researcher tried to use an empathic attitude when meeting others on the trail and when talking with concerned people. The researcher's appearance varied slightly and was dependent on the mode of travel for a particular day. Some days, the mountain bike was used so the researcher

wore Lycra bicycle shorts and a t-shirt to play the part (and for comfort) of this trail user. Other days as a hiker, the researcher dressed the role with hiking shorts ,t-shirt and hiking boots. The intent of how the researcher dressed was to "fit into the setting", not to bring attention to his appearance, and to develop credibility as a fellow trail user.

3.2.4 The Research Participants

The selection of research participants was not random. Randomness is required for statistical purposes and is not required in the empirical data collection of a qualitative study. Participants were selected, at first, simply by the opportunity presented when the researcher met them (physically) in the settings and then later by using a chain sampling technique in which the researcher was referred to or made aware of other interested participants. In Jasper, data came from co-workers, bicycle renters, bicycle tour participants, friends of the researcher's room mate, visitors from Edmonton, and others who were met as a part of the lived experience. Similarly in Edmonton, data originated from store staff and customers, as well as friends and acquaintances from the university and social circles. Later interviews became more selective as trends were confirmed, the dimensions of the phenomenon became more apparent and participants with strong attitudes were chosen for their willingness to articulate them. Banff setting interviews were also selected according to people who would have direct involvement in the issues: park staff and local people. They were selected by the opportunity of the researcher to physically meet the person in the field. Depth interview participants were selected more by their ability or willingness to express themselves. One interview, while on the trail, was the result of a couple of bicyclists noticing the researcher sitting on a rock writing in a book, making field notes. Their curiosity caused them to approach the researcher and a conversation subsequently developed and progressed into a conversation-styled interview. The researcher sought wherever possible to include people who had a mixture of attitudes and opinions towards bicycling and recreation conflict. Eccentric or obsessive personalities were not solicited, in order to keep the focus of this

research on a "common" or "normal" trail experience. Extraordinary people and their experiences would have painted a different picture as compared to the "normal" everyday experience that this research intended to study.

3.2.5 Data Analysis

Data originating from participant observations and interviews were recorded in the form of field notes. For each setting; observations, conversations, setting descriptions, impressions and developing theories were recorded in the field notes. Notes were also made post interview or observation. The next step in the research process is to make some sense of the raw data, the lived experiences, by analysing the data's contents.

Field notes were categorized, at first, according to simple concepts as represented by a single or a few words. An example of this would be the term "bicycle experience" which was used to denote the perception that a person gave to what it meant to bicycle on the trails in a national park. Experiences were later divided into more complex concepts such as nature appreciation, and feelings of speed and excitement, to name two. Typologies and broad themes were developed and changed, as new information confirmed or qualified the data as it became known. The intent here was not to organize the data according to existing theories but to allow the data to emerge into grounded theories. Grouping like information and indexing them was done according to the field knowledge as experienced in the Jasper setting. Each additional interview and observation in the Edmonton and Banff settings gave feedback, and either built upon or revised the themes that were emerging. An example of this would the broad theme of hikers' dislike for trail bicyclists. Specific themes within this broader issue began to emerge from the interviews, such as the inconsiderate attitudes, and reasons of personal safety. The theme that bicyclists were inconsiderate, was recorded both in direct quotes and in researcher observations. This theme was also evident in trail bicycling articles suggesting this was a common belief. Jacob

and Schreyer's (1980) conflict theories were then considered for a possible explanation of this phenomenon. In this case, low tolerance for lifestyle diversity, as defined by Jacob and Schreyer, can explain why hiker's perceive bicyclists as inconsiderate. Care was given to allow for the development of grounded theory rather than the more familiar (for this researcher) testing of hypotheses and theories developed prior to data collection. Wherever possible, the emerging themes are illustrated in direct participant quotes, summarized participant perceptions, and from the researcher's perceptions from lived experience. Once themes appeared to be recurring and predominant, existing recreation conflict theories were reviewed to test the patterns and themes emerging in the data, and to help confirm the grounded theories of this research. The next chapter will organize and present the data, the patterns and themes as found in this research.

CHAPTER FOUR

DATA PRESENTATION- SETTING THE CONTEXT

4.0 INTRODUCTION

"The purpose of research is to seek the answer to a problem in the light of the facts that relate to that problem" (Leedy, 1989:168). Consequently the next two chapters will present the phenomonological data relating to the issues of trail bicycling and trail conflicts. The information in this study is comprised of three separate yet interconnected sets of data. Chapter four presents data comprised of the context or setting of the phenomenon of trail bicycling, and the perceptions of the researcher. Chapter Five presents the data in the words and actions of trail participants. The context of the phenomenon of trail bicycling has already been identified as the two national parks of Banff and Jasper. However, in addition to the physical setting of these parks, trail bicycling is also effected by the activities' historical development and managerial setting. The researcher's perception, using a variation of the recognized phenomenological approach of heuristic inquiry, was used to develop a basic understanding of the trail bicycle issues. Recording and presenting the first two sections will assist the reader to understand the data in chapter five. Data is presented where themes from interviews reveal the experiences and perceptions of current trail users.

4.1 TRAIL BICYCLING IN BANFF AND JASPER

The perceptions of today's bicyclists and hikers have not just suddenly appeared. Like any view of reality, the perceptions of trail users have evolved from the history of the regions and specific areas where mountain biking has become popular, the history of the activity , and the history of policies pertaining to the trail bicycling issue. This section will briefly describe, with reference to documentation, these historical developments.

The first trail users of the Rocky Mountain parks were horse users over a hundred years ago. Organized trail rides, using animal tracks and later cleared trails were very popular and one of the few ways to see the the scenic beauty of the interior of the national parks. Equestrian rides, now considered a traditional park activity, are still quite popular for tourists and locals who own their own horses. Specific trails have been designated for horse users to restrict environmental damage and separation from hikers. The number of trails restricted is not that large possibly due to the lengthy social tradition of this activity and the political and economic influence that has grown from this specialty group.

Walking or hiking in the wilderness was an early national park activity, which along with horseback riding was growing in popularity prior to park designation and during the early years of the park's history. However, it was not until the late 1960's, with the improvement of equipment and renewed interests with the natural environment, that hiking and backpacking gained wider and more popular acceptance. Banff and Jasper were ideal for these activities, with spectacular scenery and opportunities to experience the 'wilderness'. Access to the most popular areas was enabled through well constructed roads that were transecting the parks. Driving for pleasure and autotourism, probably the most popular activities in the parks (Bella, 1987), initially opened up access for automobile traffic and had a multiplier or 'spin off' effect for hiker accessibility. The Icefields Parkway, an internationally known highway from the town of Banff to the Jasper townsite was originally constructed to increase visitations to the parks. This road gave easy access for hikers to parts of the parks that had previously been too far or difficult to reach for the average pedestrian park user. Developing and upgrading roads and constructing trails and campsites have opened up the backcountry to users who have previously would have been prevented from experiencing these areas. Organizations such as environmental and hiking groups, for example the Alpine Club of Canada, were created with a vested interest and strong political voice to maintain the integrity and accessibility of hiking and associated activities in the national parks. They continue to be a strong advocacy group in this regard.

Bicycling in the mountain national parks has had an equally lengthy but less publicly known history. Photographs of bicyclists camping near Banff have been found circa 1903 (Glenbow Archives NA-2755-11 as found in Humber, 1986). The Icefields Parkway has not only attracted motor vehicles but has become an internationally renowned destination for bicycle tourists (IBI group, 1984). Prior to the late 1970s though, few people ventured out into the backcountry on bicycles due to the difficulty of riding and the punishment put on rider and equipment. It was not until technical advances in design and materials, of what is now known as the 'mountain biko', that has allowed bicyclists to travel on rougher surfaces and steep terrain. The first mountain bikes originated in California in the late 1970s, but it was not until 1982 that the first production mountain bicycles were for sale and available in Canada. The popularity of mountain bikes has grown exponentially since that time because of the ease of the riding position, gear ratios, and the increasing popularity of bicycling in general. Bicycling in the nineties is ranked sixth in activity popularity with 64 percent of all Albertans participating. (Alberta Recreation and Parks,1989). Mountain bikes, used for trail bicycling, now comprise approximately 80 percent of all bicycle sales (Field notes: Bicycle Retailer, July, 1991).

Gradually an increasing number of mountain bikers were found to be using the trails in the national parks. As managers of these areas the CPS had to respond to this new recreation activity. Two issues were addressed by the CPS. First was the issue of the appropriateness (or other wise) of this activity in the national parks. The second issue concerned the scale of the activity and future levels of participation.

The CPS acknowledged the increased interest in trail riding (Hamilton, 1990:7):

> As an activity, trail bicycling is growing. Every year the sale of trail bicycles makes up an increasing proportion of the total bicycle sales in North America. The result of this trend is that each year there are more trail bicyclists using the designated trails in national parks.

A CPS policy was then written to manage the new trails users. A regional directive for trail bicycles was issued in 1983, trail expansions occurred in 1984, restrictions in 1985 (resulting from a trail issues workshop), and further revisions occurred in 1986. A number of papers were written by or for the CPS to provide background information on the trail bicycling activity (see for example, Bronson, 1985; Gadd, 1982, 1987; Parks Canada, 1984). The CPS developed the Western Regional Directive WRD-61 to set policies/directives on issues of trail bicycling and licensing of commercial bicycle outfitters. This directive also called for monitoring the existing situation for a three year period (1985-1987) and was later extended to 1988. The monitoring was to determine (Hamilton, 1990:2) :

1. environmental impact
2. trends in use (total use, overnight and multiple day use, organized group use, party size, organized events),
3. acceptance/conflicts with other backcountry users,
4. preferred types of trails,
5. public safety requirements.

One aspect of the monitoring system, was a study by a University of Calgary student on trail bicycling and other trail users .The results of the University of Calgary study, (research period from 1986 to 1988) indicate confirmations of previous reported concerns and disagreement with predictions from the 1985 trail bicycle workshop (Hamilton, 1990). Hamilton describes the concerns of the CPS as follows (1990:2):

> -Users of trail bicycles appear to be traveling longer distances and over-nighting considerable more than originally anticipated.
> -There are indications that fishing activity patterns at some backcountry lakes may be changing due to the use of trail bicycles.
> -There are numerous indications that the conflicts among hikers, horseback riders and trail bicyclists, are stronger than was anticipated.
> -Safety concerns may have been underestimated at the workshop. There are reports of collisions and near misses between trail bicyclists and hikers.

This 'monitoring system' gave a description of the activity in the early development stages of the trail bicycling activity. The monitoring system or the system of collecting data however was questionable, since no written document could be found pertaining to the methods or results. Staff in both Calgary and Banff believe formal systems were not put in place. The CPS does have written surveys of user preferences from Rollins (1991) and a current study of Lake Minnewanka (in the process of being analysed and written) and the "preliminary observations of park wardens" (Field notes: CPS employee,1992). The CPS also relies on comments and complaints made by park users about the parks and the services provided. This system of user feedback requires users to be concerned enough to write a letter or make a telephone call to identify a problem. In theory the complaint would be recorded and the information used to improve the park's services. This is an accepted method of including park users in the decisions and development of park management. However, the lines of communication between front line staff and decision makers are informal and are not well established. A CPS employee who does have decision making authority explains the situation for trail bicycles as he/she sees it (Field notes: paraphrased, 1992):

> There is no real problem. No complaints from visitors. No letters, phone calls. Although through existing communication channels, some complaints or bouquets are most likely lost en route. There is limited communication between wardens and visitor services. ... (currently) Nothing is going on to monitor the situation. As far as I know, a file of complaints has been shipped away to Calgary.

The issue here is not to attach blame, but to identify that there is some confusion in the process used to gather information and information transfer to senior decision makers.

The background papers submitted to the CPS played an important role in determining policy. Although it is not a goal of this paper to measure how much influence this information has on developing policy, it is important to gain an appreciation of what was being submitted to the CPS decision makers. One early view of the activity of trail bicycling was written by Ben Gadd, Park Naturalist in Jasper National Park, for the Four Mountain Parks Management Plan. Gadd's

(1987:7-8,11) perception of off-pavement cyclists, although lengthy, provides a good description of the early issues associated with this activity:

> As mentioned already, there is nothing in park regulations to prevent cyclists from moving off paved roads, onto fire roads and trails. Very few cyclists do, though, because today's ten-speed machines are designed for best performance on the pavement.
>
> Nonetheless, some of the unpaved roads in the mountain parks are kept in good enough condition for careful ten-speed use. ...
> A study of this fire road (East Kootenay) as a potential bike path (MacRae, 1979) uncovered the surprising fact that many cyclists would travel fire roads if they only knew where these roads were and what condition they were in. ...
>
> Perhaps the most important factor in off-pavement cycling is the introduction of special off-pavement bicycles. These have become available in Canada only within the last few years. Designed for use on loose-surface roads, and trails, they have wide tires and extra-strong frames. Specially alloyed parts keep the weight down.
>
> These bicyclists can go nearly anywhere. For example, it's possible to ride one, with occasional sessions of pushing or carrying, the full length of Jasper Park's Skyline Trail. Hikers normally take two or three days to cover the distance; an experience off-road cyclist in good physical condition can do it in eight or ten hours.
>
> An off-pavement cyclist sees this activity as self-propelled, healthy, non-polluting and easier on the body than carrying a heavy backpack (the weight rests on the bicycle rather than on the person). But there are certain negative aspects: the possibility of accidents or breakdowns far from help, the chance of sudden encounters with bears, and the probability that horses met along the way will be spooked (Parks Canada has already received a complaint from a Jasper-park outfitter, one of whose pack horses threw a load when passed by cyclists). Further, off-pavement cycling incurs the displeasure of those who dislike seeing people riding machines in the wilderness—even human-powered machines. On the other hand, a bicyclist moves through the back-country faster than a backpacker, lessening human impact on the environment from camping. ...
>
> Off-pavement bicyclists are not as hard on mountain trails as motorcycles or horses, but if trail bicycling becomes a fad in the mountain parks, then some sort of wear and tear is sure to appear, along with unforeseen problems that can arise when a lot of visitors suddenly take up a new activity.
>
> Currently, trail cycling is discouraged in Banff National Park, where the chief of visitor services equates it with vehicular travel off established roads; he considers fire-road cycling, on the other hand, to be acceptable. The horse/cyclist incident in Jasper National Park has caused the superintendent there to consider closing all but a few fire roads and trails to off-pavement cyclists. Officials of the other mountain parks neither encourage nor discourage off-pavement cycling for the time being, preferring simply to wait and see what the positive and negative effects are in their particular parks. ...
>
> Although the use of off-pavement or trail bicycles in the backcountry is not widespread, there is some concern that it could grow in popularity. Parks Canada is concerned about the potential impact on trail surfaces, wildlife, and other

backcountry users. Parks Canada does not intend to encourage this type of backcountry use in the future. DO YOU HAVE ANY CONCERNS WITH THIS APPROACH ?

The early CPS policies appear to be based on a number of sources including background papers, park warden perceptions, the University of Calgary study, and a bicycle information workshop.

4.2 THE AMERICAN INFLUENCE

Along with the influences from the historical development of national parks, it is thought that the situation in the United States has influenced perceptions of trail bicycling in Canada. The level of influence of American trail bicycling on the Canadian situation is very difficult to determine and even more difficult to measure. Although it is beyond the scope of this research to even attempt this in any detail, the American influence must be achnowledge, given the rapid development of this activity in America, the availability of American outdoor equipment, literature and fashions into Canada , and the extent of cross-border recreational tourism. The use of the mountain bike itself in Canada proves there is a movement of ideas and artifacts between America and Canada. This section will briefly describe the trail bicycling issues as seen from an American perspective in current magazines and newspapers which are available in Canada. .

The issues of trail bicycling has become a major problem for park and outdoor recreation managers in the U.S.. Through the print media, readers of specialty outdoor, backpacking and bicycling magazines can watch the issues of trail bicycling access unfold. The images and information found in these articles may influence or help to create the attitudes (positive or negative) of trail users (Jacob and Schreyer,1980), and nontrail users alike, towards the new activity of trail bicycling.

It should be noted that many of these articles are concerned with public access issues and they are based on the fact that the United States government has prohibited all 'mechanical transport' in wilderness areas in the 1964 Wilderness Act. This legislation has been interpreted to include the bicycle as 'mechanical transport' therefore restricting bicycling on designated wilderness areas which include national parks. However, unless otherwise posted, trails are open on Bureau of Land Management and Forest Service managed land. While some bicyclists have accepted and even support the protection of wilderness areas, the problems of access (trail closures) is very much alive in non-wilderness designated areas. Bicycling Plus Mountain Bike, has a section, "Terrain", devoted specifically toward the land access issues, where it is reported which trails are being opened and closed across the U.S. and how local clubs are reacting towards the land manager's decisions. The Sierra Club support the Wilderness Act and identifies mountain bikes in the same category as motorized off-road vehicles therefore prohibits them in wilderness areas (Kita, 1986).

4.2.1 Common Themes- Education and Image

Common themes of the trail bicycle articles are: education, image problems, conflicts with hikers and horse users, management issues, and, environmental impacts. Many articles recommend the need to educate bicycle riders to ride responsibly toward other users and for the environment (Blumenthal, 1990). Readers will notice remarks such as: "But thanks to an education campaign led by ... the trails have remained relatively tension-free." (Abramowski,1990:29) Most education programs have focused on educating bicycle riders about trail etiquette and safe riding practices, and this seems enough for some areas. However, areas of larger populations, such as in Marin County, California, where there are higher user densities and longer histories of trail conflicts, are receiving most of the media attention and help to fuel the conflict issues. Images of: "unconfirmed report of hikers attacking mountain bikers on trails" and "Speeding cyclists have caused 2 equestrians to be thrown from their horses" become part of

reader's perceptions of the trail access issue. Dennis Coello's article in Sierra magazine graphically depicts the extent of the problems for a northern California area:

> An armed ranger crouches in ambush where the narrow hiking path intersects a paved road. His prey, first spotted by a park-district helicopter patrol, sprints unwittingly around the last bend and directly into the trap-where a stern glare, a lecture, and a $230 fine await him. ...Another poacher or marijuana grower caught red-handed on public land? No: a bicyclist out for an early-morning ride on a trail where cycling is prohibited (Coello, 1989:51).

The Wall Street Journal has even published articles to perpetuate the problems associated with bicycles with the head lines: "A New Menace Lurks in the Wilds: Supersonic Cyclists: Reckless Backwoods Pedalers Irk Hikers and Equestrians And Lead to Speed Traps" (Wells, 1989:B1), and, "Already, In Area Garages, Tinkerers Are at Work on a Stealth 10-Speed" (Hinge, 1989:B1).

The popular literature reveals stories of the two opposing sides: the traditional hikers and equestrians defending their quiet, slow paced trails from the mountain bikers who, in the eyes of the traditionalists, are there for speed and non-wilderness experiences. The bicyclist has been given a multiple persona with one side having a reputation of a marginal lifestyle image and riding hard, and on the opposite side, an image of having been a hiker and now wants to experience the wilderness in a slightly different manner. In a letter to defend the wilderness from bicycles a concerned wilderness advocate, who represents a traditionalist's view,writes :

> The joy of cycling is speed- pure and simple, which is completely contrary to the purpose of a natural setting and the reason to go to these places; to get away from speeding machines and things "civilized" (Hoefler, 1990).

Ms Hoefler's attitude is not unique. Backpacker magazine received many "smouldering" letters as responses to a readership survey in 1990. Backpackers expressed many concerns ranging from the visual obstrusiveness of the bicycle, physical impacts on the environment, the reasons for wilderness, safety considerations, to the opposite view that bicycling is an appropriate outdoor

activity. These letters to the editor describe the perceptions that people hold of bicyclists and of the trail bicycle issues (Backpacker, 1990:8) :

> The psychic impact mountain bikes have on hikers is the real issue here, not trail erosion. All vehicular traffic should be prohibited on state and federal hiking trails.
>
> (a road biker explains) ... I plan to buy a mountain bike so I can ride to work more often (and contribute less to our plant's demise). Nonetheless, I adamantly oppose the use of mountain bikes on hiking trails. They do not belong there, period. Put them on their own trails with strict restrictions.
>
> (a hiker/bicyclist states) ... Firsthand experience awakened me to the tremendous physical impact bikes have on hiking trails and caused me to all but give up the sport. There can be no middle ground here. Trails must be restricted to hiking.
>
> Mountain bikers and other mechanized backcountry users miss the point of the outdoors. You should take time to enjoy the wilderness, not whiz by it. Unobtrusive technology to allow greater comfort and safety makes sense; technology to conquer the wilderness does not.
>
> Mountain bike riders are city slicker yuppie pinheads. I hate black Lycra.
>
> If we set a precedent of accepting mountain bikes, we open up a Pandora's box. Next, ATV riders will demand access.
>
> I am tired of near-collisions with mountain bikers on hiking trails, especially when backpacking with my children.
>
> Backpackers have no greater claim to trails than any others who choose to explore the backcountry under their own power. To exclude one group in favour of another serves only to drive a wedge between groups with much in common.
>
> ... My mountain-biking friends (most of whom also enjoy backpacking) are conservationists as dedicated to preserving the wilds as I am.
>
> Who are we to judge a person's choice of escape? Mountain bikes allow many people to experience places they could not otherwise because of time restrictions, job commitments, lack of money, etc.

The images of mountain bikers as expressed by these reader's comments reveals a variety of perceptions. Backpacker has also published a series of articles on the trail situation in the U.S. where the problem is between traditional users: hikers and horse users, and the new activity of trail bicycling. The issues are concerned with environmental damage, traditional trail users, irresponsibility, and the concept of "wilderness" (Knize and Chase, 1987; Chase, 1987; Delves, 1987). Bicycling magazine has also published articles on the trail bicycle debate with predominantly negative views from hikers (Readers of Backpacker magazine, 1990), and bicyclists

defending their activity as an activity similar to hiking (Barlow, 1990b). The images of the activities are created from personal experience (or possibly the lack of experience) with other trail users. general perceptions of the activity itself, and possibly from information gathered from magazines and other sources describing the history and events involved with trail bicycling.

4.2.2 Counter Culture to Commercials

Problems with a "bad" image originated with the first "mountain biker" image, as created along with the new bicycles, where the participants were considered on the fringe of society.. This image was portrayed with adjectives such as: out of control; "kamikaze", speed seeking, and rule breaking. Patrick (1988:20) in the Journal of American Culture, explains, what he believes is the difference between a 10-speed road racer and a mountain biker:

> The fundamental differences between a mountain bike and the usual ten-speed bicycle is often attributed to a link with the 1960's counter culture movement. ... The mountain bikers like to see themselves as rowdy nonconformist while road racers consider themselves to be the elite of the sport. Road racers note that mountain biking is characterized by its dare-devil riding style that often leaves riders beaded, cut and exhausted, but grinning.

Patrick believes this activity is a fad; an extension of baby boomer consumerism and a symbol that is required to be considered popular or accepted in some social circles. Patrick continues his assessment of mountain bikers, from a review of images in the media,.as freedom seekers:

> While Bo Emerson comes closer to the truth when he wrote that mountain bike enthusiasts were "New age hippies, surfers,...yuppies who commute,.... hikers, and even some road bikers. ... who simply want to keep pace with the latest rage in wheels." These riders are often young adults (20-35) who seek an escape from the responsibilities of life. They find such an escape through an expensive bike, or more clearly, a toy. It is interesting to note that their method of escape is a part of the culture they try to leave behind. The high monetary cost of fleeing the "real world" becomes an afterthought because these riders are happy to see daylight. (1988:20)

Although not to the same extent, the image of nonconformity is still an image of mountain bikers as found in the popular media. Coello (1989:52) explains, in contrast to a club's attempt to teach trail etiquette and work with park administrators, there still exists a renegade mountain bike image:

> Yet the sport's renegade image is hard to shake. In the same city another, slightly less public group educates its riders about the "best" times to ride on prohibited trails without getting caught (in the early morning when fog obscures the helicopter patrol's view, and on the crew's day off). Bicycle manufactures have capitalized on a sport once described in *Rolling Stone* as an excuse "to get pig filthy and act rude" with ads that peddle products with appeals to machismo normally reserved for beer, truck, and motorcycle campaigns.

The image of the mountain biker is changing with time and, with the regret of some, is becoming more main stream. One of the more popular bicycle magazine's editor confesses "I miss that anarchy, and I feel confined by rules that didn't exist when I started mountain biking. But you can never go back, and nobody is getting younger" (Kelly, 1990a:2). Kelly describes the "graying" of the sport where riders are older, respectable, and are no longer the domain of males in their twenties. Kelly (1990a:2) observed a trend of trail bicyclists in Marin County; three women riders in their 40s and 50s:

> They were obviously well-to-do, they were riding at a reasonable speed, and I could tell from their animated conversation that they were enjoying their outing immensely. Ahead, I saw another woman riding a horse, and I imagined that there was little chance of conflict when these cyclists passed. I was right.

The perception of the mountain biker now includes bicycle commuters who are environmentally aware and exercise conscious, teenaged girls and boys where "a mountain bike is as much a part of the essential outfit as shaved chests in a heavy metal band" (Kelly, 1990a:2), bicycle couriers, and the ordinary person down the street. However, there still exists a split in the mountain biker image. Mountain bike racers are still thought to live the lives of the 1960's counter culture which is considered appropriate by race fans. Patrick writes about a woman racer who has a winning record and uses unusual antics:

> The reporters tend to portray her as a typical representative of the sport. This, regardless of whether it is true or not, suggests that people want to see the sport as rowdy, unconventional and light hearted. Thus, the sport of mountain biking becomes linked further with rebellion (1988:21).

The other end of the mountain bike image is portrayed in the most recent forms of advertising. Kelly (1990b:2) in an editorial explains the change from the 'early days' to today's advertising image:

> When I started mountain biking, the sport didn't even have a name. It was as counterculture as any activity I'd ever been involved with. The participants were mostly bike bums, unmarried young men with serious cycling habits who spent endless hours tinkering with balky, experimental machinery.
>
> Today, mountain bikes are mainstream. You can spot them on television every night. ... Remember, these ads are not created to appeal to mountain bikers, rather to use mountain bikes to shape a lifestyle image that appeals to a wider audience.
>
> Commercials that show mountain bikers draw upon several obvious themes. Some conjure up adventure, such as an ad for Canadian tourism that shows a variety of activities available to visitors, among them mountain biking, illustrated by a shot of happy off-roaders. ...
>
> Some advertisers stress good health ...generic ads promoting dairy products,...a drug store chain ...a commercial for an iron supplement ...two athletic shoe companies ...(and) (a)n insurance company uses a shot of a man and woman with kids on mountain bikes, apparently to create an image of a young, healthy nuclear family.
>
> Youth is another commercial theme. ... Young-but not too young- is the theme of a beer commercial ...
>
> The image of mountain biking created by such advertising may not be accurate- after all, it's only an image-but it reveals how our sport is seen by the public. The television image of today's mountain biker is not the gonzo-shred racer who fuels the land access debate, and it isn't the countercultured quadragenarian who started the sport. Instead, it's an active, healthy, family-oriented young person, a responsible drinker of either sex who sometimes chooses a soda instead of a beer. How many of us does this really describe?

Kelly's article, although written to deny his connection with the media's main stream image of mountain biking, does describe the images, at least in advertising, of mountain biking as a positive, culturally acceptable activity.

The conflicting and often confusing images of mountain biking in the American situation continue to cause problems with the land access issues. With the introduction of a Bill to amend the Wilderness Act, debates of the mountain biker image and suspicions of ulterior motives were expressed. The 1989 amendment was suspicious for environmentalists, as it apparently was a first step to be followed by further amendments to allow resource development (Sprung, 1990a,1990b). The image problem was not as straight forward. Although, Sprung suggests there are many similarities between mountain bikers and environmentalists such as common environmental goals, the environmentalists were sceptical. "(I)t wasn't long before someone said, "How many mountain bikers are like you?" And that comment led to several tales of encounters with reckless and disrespectful riders" (Sprung, 1990:28). Barlow (1990c) writes that hikers and bikers are very similar in their trail attitudes and need to talk to each other to make this discovery. Most articles on the trail bicycling access issue believe the negative reckless image is confined to a few people while most trail bicyclists are responsible outdoor recreationalists. The confusion of the activity is further complicated with the definition of what exactly is "mountain biking" which was the subject of one article where the "answer is in the mind of every rider" (Barlow, 1989:72).

The last American image of trail bicycling, to be mentioned in this section, is the perception that the mountain bike can cause a great deal of environmental damage. An example of this is the already mentioned quote of a hiker's first hand experience of the tremendous physical impact bicycles have on hiking trails. Articles of "soft cycling" (Barlow, 1990a) or low impact riding can be found where riders are advised to be aware, have respect and avoid wet and fragile areas. These articles are similar to articles that address low impact camping skills and attitudes. Requests for soil studies are common since only two studies using scientific methodologies have been conducted to analyze the impacts of mountain bikes on trails (Sprung, 1990) Most people perceive the physical impact of bicycle tires sits somewhere between the lugged boots of a hiker and the hooves of a horse. Attitudes may change with scientific studies to prove one way or the other the environmental impacts of trail bicycling.

To briefly summarize this section, it is evident that the images of trail bicycling or mountain biking and its participants is not definitive. Americans see bicyclists as another trail user who adds to the problems of over crowded trails. There is also the image by hikers that bicycles are inappropriate in "wilderness" areas and the riders are a part of society's fringe, having no respect for other users. Hikers are also concerned with their personal safety and with environmental damage. Trail bicyclists, on the other hand, are fighting for equal rights to use the trails and believe the majority of trail bicyclists to be responsible nature appreciating people.

4.3 THE ALBERTA PERSPECTIVE

The most significant differences between the American situation, as seen in the media, and what is perceived in Alberta are the shear number of trail users, and how the respective governmental agencies have legislated the backcountry. In Alberta, there are not the same large urban areas to attract people from, people who create the high densities on the trails and possible over use of the limited resources. The actual numbers of trail users is not known in the national parks. Little information has been gathered on bicycle users in the national parks.

> The absence of a mandatory registration system makes it impossible to determine what the total use levels currently are. Overnight registration records do not indicate when trail bicycles were used. However, direct observations by park staff indicate there is a continuing and consistent increase in trail bicycle use. (Hamilton, 1990:3).

The legal difference between the American situation and the CPS in Alberta, although not necessarily known by the general public, is the wording of what is prohibited in wilderness areas. While the American legislation specifies that no "mechanical transport" is allowed in their Wilderness Areas (including U.S. national parks), the Canadian legislation for the CPS states "No motorized access will be permitted" (CPS, 1991:30) for the most restrictive zones of Spacial

Preservation (zone I) and Wilderness (zone II). Motorized access is allowed for zone III Natural Environment, zone IV Outdoor Recreation, and, zone V Park Services. As this legislation reads, bicycles can not be prohibited from CPS parks, on the grounds of being a mechanical device. The Canadian legislation allows mechanical but not motorized vehicles in the backcountry.

4.3.1 Media Images

Although there are definite differences between the American and Alberta situations, trail users in both settings are influenced by the media and their recreation experiences to create their perception(s) of trail bicycling. Not unlike Americans, Albertans develop the perceptions of trail bicycling from what they see, through reading and television, and from what they experience in their recreation. Recreation experiences are not confined only to those times while using the trails in Banff and Jasper, but also experiences in other natural areas , such as in. Kananaskis, and, experiences on park trails in urban settings.

People interested in bicycling in Alberta, in general, can obtain an overview from a document titled: Alberta Bicycle Vacation Guide (Johnson, 1991). This free guide lists riding areas for Edmonton and Calgary, provincial parks, and the specific areas of Kananaskis, Banff, and Jasper. Kananaskis is marketed as "Fun for the Family" on clearly marked paved trails and for the mountain biker; there are 1,400 km of trails, roads, and fire roads to make accessible the flora and fauna of the area. Canmore, with it's Nordic Centre, is included in the Kananaskis area, and with its one way, specially marked (nordic ski) trail system caters to all levels and abilities. Banff and the Icefields Parkway is focused on road touring "(f)or those who like to ride on smooth pavement, encounter breathtaking scenery and a chance to see wildlife" (Johnson,1991:29). Mountain bikers are given descriptions of trails and fire roads available in the park with the warning "Do not ride on clos[illegible] Park Services may close all off road trails to bicycle riding" (Johnson, 1991:31). [illegible]ated more for the trail bicyclist (Johnson,1991:35):

> Jasper is a mountain biker's dream. There are nearly 1000 km of dirt, gravel and paved trails to provide unlimited cycling enjoyment. These trails challenge all levels of rider and are conveniently located in and around the Jasper Townsite. Hardcore mountain bikers are provided the opportunity to test their skill level and endurance in Jasper. The spectacular scenery that is accessible and available to bike riders is simply incredible.

Descriptions of difficult and easy trips are given as are the types of landscape to be expected and experienced. Bicyclists are reminded of sharing the trail with hikers and horse users and to watch out for bears. In summary, information is available for bicycling in Alberta; the locations, the trails, accommodation and the possible scenic experiences available. This booklet describes the activities of bicycling and the settings where this activity can occur, but does not explain the opportunities for experiences. A person would need prior knowledge and experience with bicycling to understand what experiences and expectations are involved with this activity. Basic requirements to participate in this activity such as a certain fitness level, ability to ride a bicycle and general outdoor skills are not given in this document. This document may mislead readers to believe that trail bicycling in the national parks is the same as bicycling on the trails in a city, which it is not.

Mountain bikes have gained a considerable amount of attention in Alberta's media. Headlines started to appear in 1983; the CPS, using the name Parks Canada at the time, announced policy development to restrict bicycling to specific trails because of complaints received about bikes on the trails (Patterson,1983:F4) In Patterson's article, the CPS expressed concern about impacts on the trails and the potential of conflict with horse-back riders. In the early development of trail bicycling in Banff it was obvious riders felt frustrated; "They're not giving us much chance to prove we're environmentally sensitive"(Patterson, 1983:F3), and the potential for problems were identified, such as conflict with other users (protocol was suggested) and the safety of bicyclists (one helicopter rescue was required). Explore magazine also reported to the public the need for trail ethics and a need for bicyclists to carefully portray the aesthetics of trail

bicycling (Hollingshead, 1984; Skrastins,1984). From the start there appeared to be different views of trail bicycling and its participants, from the perspectives of resource agencies (including the CPS) and other park users.

The Calgary Herald, in it's "Outdoors" section, has informed it's readers of: the paved trails and roads in Kananaskis (Patterson, 1984a); of adventurous mountain biking trips to the Himalayas, with training rides to Mount Assiniboine (Patterson, 1984b); and, of the restrictions of backcountry trails to bicyclists to "avoid disturbing wildlife, damaging fragile terrain or causing serious conflicts with other users such as hikers and horse riders" (Patterson, 1985:E8). Readers have also been informed of the continuous monitoring of bicycles in Banff, with the help of a University of Calgary graduate student, and of the restrictions on trails due to overall limits put on visitors and protecting bear habitat (Patterson, 1986).

Readers of the Calgary Herald have also been informed of the costly and "serious problems" in Calgary's parks because of off-trail damage resulting from bicycling. The damage on and near the trails in Calgary is equated to the restrictions made by Parks Canada and the possibilities of $500 fines (Dudley, 1986). The merits of the trail system in Kananaskis County has been reported as has the strong potential for recreational clashes between bicyclists and horses, where "Luckily, no one has been hurt yet, but the potential is there for someone to get run over" (Hedley, 1988:F4). The thrills of Heli-biking in British Columbia (Gindling, 1989:D1) has also been indentified where:

> a rider blurred by, his free wheel chattering, legs stretched out, eyes bulging, mouth open, and an excited scream bellowing from his mouth. ... That one brief moment of ecstasy pretty much summed up what heli-mountain biking is all about.

The Edmonton Journal has also published similar mountain bike articles. However, instead of stories of Kananaskis and Banff, Journal readers were given stories about the problems

of bicycling and trail use in the river valley trails in the city of Edmonton. Readers were warned of "Thousands of bikers flood city trails" where the "mountain bike craze has helped to swell the number of estimated visits to the river valley this year to 590,000, a 30 percent increase from last year's total", with a record number of complaints and the "possibility for conflict is enormous" (Jimenez, 1990:B1). Jimenez's (1990:B1) article has only one positive comment which is: "despite growth in use the number of collisions in the river valley is down." Edmontonians have also been informed of a bicycle patrol, who have noticed "reckless speed on the overcrowded trails are becoming a major concern...(and) too many people (are) getting hurt" (Campbell,1990:B3). There appears to be some confusion as to what is actually occurring on the trails and how people feel about it. Boehm (1990) reports some people are experiencing problems with a few riders and some pedestrians but trail users are unsure of the need to change city bylaws. Bicycle commuting has also becoming very popular, where riders are considered as environmentally aware and ride bikes for their exercise. The biggest problem with commuters, or bicyclists in general, according to some Journal articles, are the problems of cyclists breaking highway traffic laws (Boehm, 1990; Ogle, 1990c).

In addition to articles of urban bicycling, mountain biking has been attributed to an increased interest of Americans and Europeans to the national parks while "relatively speaking, some of the easiest mountain biking around is in Kananaskis Country" (King, 1990:E20). Macho images of mountain bikers have been portrayed, as have possible experiences of bicycling in Kananaskis to see great views, physical challenges and speed (Fraser,1990). Headlines such as "Bikers clog back-country trails" have been used to describe a positive look at bicycling with its increased popularity (Edmonton Journal,1990) With the increased popularity, non-bikers perceive problems with the new trail users because of the images that mountain bikes can go anywhere and "many of the bike riders are apt to be relatively inexperienced with the wilderness and thus unaware of its special requirements" (Purcell, 1990:16). Gerhardt Lepp, an author of a

backcountry bicycling guide book, gives suggestions for being prepared for the unknown in the backcountry as well as problems of easy accessibility to delicate alpine ecosystems (Cope, 1990).

The "kamikaze" image as described in the American situation is also seen in articles about trails in the mountains and in the cities of Alberta. Readers are told of the technical advances that allow bicycles to go almost anywhere and the "out of control" riding styles of bicycling's visual minority (Ogle, 1990b). Ogle also explains that national parks are not catering to the kamikazes, although not laying charges or seizing bikes, parks are trying to communicate park expectations "so we can reduce conflict ...(and) in a sense create as much freedom as we can for all individuals (1990b:C10). The image of speed still is associated with trail bicycling even when the majority of users are families. "It hasn't become a sport of killer speed, racing down the the mountain trails at this point. But that will come"(Ogle, 1990a:D1).

In 1990, an article in the Calgary Herald sparked a series of articles and letters to the editor verbalizing the conflict between trail bicyclists and the Canadian Parks Service. The first article reported a petition calling for Banff National Park to relax its restrictions on mountain bike use (Dawson 1990a). The argument was between the Park's policy to discourage "mechanical devices" in the backcountry and a environmentally aware pro-bicyclist who states the real problem is the "social conflict" between trail users, where it is acknowledged that there are a few "jerks out there" and they are ruining it for the majority of responsible riders. The debate continued with a letter to the editor supporting the bicyclist's view point with a comparison of bikes to horses (horses cause more environmental damage) and restating the problem as a social conflict and not an environmental problem (Gerein, 1990). Dawson, the writer of the first article, then wrote a column in which he admitted to riding on a closed (for mountain bikes) trail (Dawson, 1990b). He sarcastically questioned the banning of bikes when horses, which are allowed to use this and most trails in the park, were damaging the environment by creating "knee-deep" ruts, eating vegetation, and leaving "traditional calling cards". Dawson questioned what is "traditional",

wonders why other mechanical devices are allowed (such as helicopters, skis, stoves) and asks for equity in the management plan. Reaction to Dawson's article resulted in two more letters to the editor. The first criticized Dawson for riding illegally and said the argument of the reckless few is also used to defend the motorized activities of motorcycling and snowmobiling (Douglas, 1990). Douglas also mentions perhaps the bicycle restrictions are to control backcountry fishing and the damage by horses is a separate issue, which some people would like more restrictions on. Douglas concludes his argument:

> national parks are among the very few places where there are significant restrictions on trail cycling. So why doesn't he go somewhere else and leave the rest of us a few trails to hike where we don't have to be constantly watching over our shoulders for the approach of the reckless minority or the arrogant majority (1990:A6).

The second letter, also to protest Dawson's article, was written by the Superintendent of Banff National Park, David Day (Day, 1990). Day notes the rigorous management process the trail policy went through with planning discussions, public support, and annual public meetings. Day also attacks Dawson's attempt at self promotion (as a reporter), poor use of the English language, and says that people like Dawson make it difficult for Parks to relate to the media. Day's letter gave rise to yet another letter to the editor where a Banff resident defended Dawson and requests answers to policy decisions (Borisenko, 1990) : "The public has the right to know what is going on in Banff National Park and why policies such as outlawing mountain bikes from most trails has been implemented". The last word on this incident (Dawson verses Banff National Park) was a behind-the-scenes-look article in Alberta Report (Hutchinson, 1990). This article details the reaction by Day to Dawson's column, where Dawson was "blacklisted" and a meeting between the Calgary Herald's editorial staff and superintendent Day was required to arrive at "an understanding".

Local papers in Banff and Jasper have also tried to inform readers of the trail bicycling issues in the national parks. An early article described the monitoring process, the public input process towards park policy, and the selection of trails by choosing trails that are "less crowded

with hikers and horseback riders, pleasant to cycle and with little mud or steep terrain" (Crag & Canyon, 1986:13). The column "Backcountry Banff" explains mountain biking as a perfect transitional activity between summer and winter and gives a possible route for cyclists when there is a light cover of snow (Crag & Canyon, 1987). An article in the Jasper Booster has identified the "reason given for closing the trails was not that the bikes were tearing up the fragile alpine countryside but rather that bikes were causing too much congestion on trails that were already being heavily used by hikers and horseback riders " (de Candole, 1989:4). de Candole also notes that the use of fire roads may prevent possibilities of congestion, but

> (t)he main draw back of the fire road routes is that bikers are required to dismount just about the point where the scenery start to get interesting. ...There is of course nothing stopping bikers from becoming hikers at this point and on the return trip they will be glad of not having to slog it all the way back to the highway on foot" (1989:4).

In summary, the Alberta context has some similar perceptions of trail bicycling as compared to the American situation. Albertans are concerned with environmental impacts, trail overcrowding, and the images of speeding bicycles and reckless riding in urban as well as mountainous areas. Traditional trail users such as hikers are the main opponents of trail bicyclists. As mentioned in the American situation, Canadian hikers are concerned with their safety, environmental impacts, damage to the concept of "wilderness" and the potential of other undesirable activities gaining easier access to the backcountry. Alberta newspapers have reported the conflicts between frustrated bicyclists and the CPS, the closure of trails and the continued monitoring of park trails. The lines drawn to distinguish between park jurisdictions, between the different types of bicycle riding and the reasoning behind trail closures are not that clear. For the uninitiated park user, according to the Alberta and American media, there appears to be quite a struggle for access to park trails.

4.3.2 Field Research: Jasper National Park

In addition to content analysis of magazines and newspapers, field research was conducted to understand the perceptions people have of trail bicycling and associated conflicts. The summer of 1989, spent by the Researcher in Jasper, was initially considered a preliminary (pre-data collection) period to become better acquainted with the research topic of trail bicycling and the potential of recreation conflicts. This time was scheduled to develop bicycling skills, and to participate and observe trail users with the goal of developing a personal understanding of the activity, the experience, and the people who enjoy hiking and bicycling. At the time, this experience was not considered data collection but a pre-research introduction into the phenomenon of trail bicycling. Notes were taken during this time, although not as detailed as on subsequent trips, to develop and organize research questions for later use. Since the observations and experiences in this section are those of the researcher, the first person narrative will be used to clearly identify what and whose experiences are being described. The following section is the data as collected through a heuristic approach in Jasper National Park.

The activity of trail bicycling is divided into two separate experiences: the guided tours and the researcher's recreational rides. The mountain bike tours were the first of their kind in the mountain parks. The company was in its first (and last) year of operation to provide customized day rides for tourists. I was hired to guide the trips and to administer the bookings and rental operations. The company thought people would like a selection of tour lengths and destinations. We quickly found out all tours were of the shortest duration; 2 to 3 hours; and were usually on trails that were accessible from town. The customers originated from street traffic, where they would notice our signs, and then decide to take a tour the day of noticing the service, or the following day if something had already been planned. The majority of the tourists using our service were Americans, followed by Europeans, Japanese, and then Canadians from outside of Alberta. Approximately fifty to sixty tours were conducted during the summer and about thirty

bicycle rentals a week. Five other companies also provided bicycle rental services in Jasper during this time.

Prior to this job, I though I would be giving tours to people in their early twenties who were physically fit. For these reasons I was unsure of my own physical ability to conduct the tours. I was pleasantly surprised by the profile of the customers we did attract. The majority of participants were in their late twenties, thirties and forties, often couples and in 'average' physical condition. They were people who wanted to do something physical and had an interest in seeing the more natural side of Jasper, but did not have the skills or confidence to do it on their own. The range of customers were from a retired doctor, in his seventies, who enjoys road bicycling in his home state of North Carolina, to "yuppie" couples and their families, to female Japanese students, and to single men and women who wanted a trail experience to go with other desired experiences of white water rafting and horse back riding. All participants were somewhat new to trail bicycling and were interested in the interpretive aspects of the trail ride. Identifying the cultural and natural history of Jasper gave participants a physical break from riding and, I think, were very much interested in the education side of the trip and not just the thrill of riding on the trails.

One exception of the summer was a teenage male from Vancouver who was in training for road races . His father wanted him to try trail riding to "build up his legs". I decided to take him on a longer more difficult trail than most to give him more of a work out. Interestingly enough, the young man could ride faster than me on the flat sections but had difficulty on the hills and the rough (roots and rocks) trail surface. His racing attitude appeared to change as we rode deeper into the forest. As he became tired he slowed down and started to notice his surroundings. He told me he did not like the steep cliffs along side the trail and preferred to go slow when the trail got rough. We ended the backcountry part of our route by getting off the bikes and going for a swim in a cool mountain lake. I think he liked that part quite a bit since it was the first remark he gave to his father when we returned back to the shop. I was quite surprised that the young

Vancouver man was the only tour (and I conducted about ninety percent of the tours) where the customer wanted to go fast and didn't have an interest in the natural aspects of the park. All other customers were full of natural history questions, they wanted to see wildlife and were interested in what I had to say about the history of Jasper and other things to do in the park Going down hills and building up speed was not the preferred experience. Although some riders were more comfortable with speed on the narrow rough trails, the comments of the customers suggested they enjoyed most just being out on the trails, moving along and seeing the beauty of Jasper. Hills and narrow trails intimidated the customers, who were uneasy on a bicycle to begin with, and made them slow down to prevent any accidents. The majority of trips did not involve meeting any other trail users.

Prior to all trips I informed the participants of how to use the bikes, how to wear the compulsory helmets, some riding techniques and trail etiquette. Unfortunately for this research, we did not encounter any so called "trail conflicts" and any encounters we did have were of a positive friendly nature. At the end of the trips I would solicit feedback asking if their expectations were met and if they enjoyed themselves. All trips could be considered successful where the participants found the interpretive program interesting ,the riding fun, and the scenery spectacular. Some people found going up hill a little more demanding than first anticipated and said "they were going to sleep well that night". One route required the bicyclists to walk their bike up a steep hill. This did not pose any problems, except for possibly a few extra grunts for the extra work required. If there were more hills to walk or became more difficult to ascend the customers may have felt differently towards this activity.

Finally, the majority of people selected a trail bicycle tour because of their limited amount of time they had to experience Jasper. The customers told me they only had a few days before going east to West Edmonton Mall or returning to Banff so they chose an activity which would be fun yet would give then the opportunity to see the scenery. Other activities they had already

participated in included the drive along the Icefields Parkway and stopping at road side attractions. They now wanted to do something besides driving, yet still see what they can in a limited amount of time They opted for a short guided bicycle tour to have the safety and knowledge of a guide, since they were not quite sure what was involved with trail bicycling and how difficult the trails would be. A guided bicycle tour was convenient and appropriate, according to the amount of time they had to spend and according to their backcountry skills.

I told many of the customers of my interest in trail bicycling and the Park's current policy. Since many of the customers were American, they would tell me of the situation back home and their own perception of the issues. They expressed the heated debates between hikers, horse users and bicyclists, and the subsequent trail closures for bicycles. Opinions were not strongly pro-bicycle because some people had had bad experiences with aggressive bicyclists on urban trails and a few on natural trails. All agreed, though, that it was great that they were allowed to experience the trails in Jasper by bicycle, and that this type of experience should be allowed to continue. Concepts of the mechanicalness of bicycles in the wilderness did not come up in our conversations.

The weather in Jasper that summer played a role in the number of people expressing a desire to go on a bicycle tour. Light rain and cool temperatures were not that much of a hindrance, however, heavy, "socked in" rainy conditions were slow days for tours and for rentals. Wet areas on the trails were avoided by customers wanting to stay clean and dry. I did not notice any of my customers riding off the trail to avoid mud or for any other reason. They seemed to have noticed that if they veered off the trail the thick underbrush was more difficult to ride on and required more effort for a sustained speed.

Encounters with other users were minimal. There were no signs or comments of negative feeling from other trail users. We encountered horses only a couple of times, and each time we

(the bikers) stopped, got off our bikes on the down side of the trail and let the horses pass. We talked to the horse back riders and even over heard some equestrians expressing a desire to try mountain biking. I personally thought we would encounter some negative feelings from the tour operators, with the thought that the bicycles may take away from the equestrian experience or was a physical danger to the inexperienced trail rider. However, negative reactions, if indeed they occurred, were not expressed directly to me during this summer.

Bicycle renters were different from the tour customers. Renters were younger, ranging from in their mid to late teens to their early thirties, mostly Canadian and did not venture out on to the trails. Talking with other rental companies confirmed the observation that most renters kept to paved roads and trails. Renters usually used the bikes to ride on paved roads in town and to possibly ride out to Jasper Park Lodge or to Pyramid Lake. Few renters reported going on trails when they returned the bicycles. People did however, inquire about easy trails but for one reason or another stayed only on the paved road ways. Most renters did not appear to have the desire to go into the more remote areas of Jasper and were content to use the bikes as a quicker means to get around town or to the road accessible sites. A couple of rental inquires wanted to rent bikes to ride to Banff. This would not have been out of the ordinary except they wanted to do this trip with either no supplies or with a full sized backpack. Either way, a trip like that would be very difficult and uncomfortable therefore I recommended an alternative mode of transportation. Mountain bike renters and some tour customers were not aware of the physical requirements to ride on hills (underestimating the difficulty) while some riders were surprised of their abilities. If they only geared the bikes down and took their time they could ride most of the trails around the townsite of Jasper.

Locals used the trails closest to town. Riding a bicycle solo or in a group often no larger than three or four, local riders were out for exercise and to get away from the crowded streets of this busy tourist town. The easily accessible natural trails are used quite often by locals bicycling,

running and walking their dogs. Trail bicycling before and after work was common for the physically active. Bicycling was considered an alternative to running, a day hike, playing tennis and sometimes going to the bar. I met only a few cyclists, probably no more than twenty people, who would go on the very difficult and longer (half day or more) trips. These are the same people who would also participate in long distance marathons such as running the Skyline trail in a day, a trip that would take the average hiker three days and a large backpack. Opposite to the very committed were the people who had a bicycle because it was the "in" thing to have. It appeared to me that the bicycle was a status symbol, to tell others that they belong and are a part of the crowd in Jasper. Seasonal workers at Jasper Park Lodge, "the lodgies", also used bicycles to commute to and from the Lodge and town. The bicycle also seemed ideal as a cheap mode of transportation for many locals, especially during the peak tourist times during the summer when parking also became a problem. People on bicycles were often seen going to the beach, off to the horse stables and climbing areas, and going for groceries. The mountain bike was an important part of Jasper as a means of rocreation and transportation.

It was difficult to fully appreciate the experiences that people were achieving on the trail bicycling tours. From their expressions; smiles, laughter, alertness, and at times the looks of feeling tired, I could tell the customers were enjoying themselves while at the same time were getting a physical "workout". Their questions and comments about Jasper have led me to believe they were interested in the natural aspects or "wilderness" side of Jasper and not just a thrill or speed side of bicycling. I did not interview tour customers; therefore I will never know exactly how they felt or what they experienced.

Like many other Jasperites I used my mountain bike for transportation. I did not own a car and found the mountain bike a cheap, easy and quick way of moving about Jasper. Commuting about town on a bike, dressed in shorts and a t-shirt, gave me a feeling of being a part of the town and of the park. I looked different from the tourists and they seemed to to envy my carefree

lifestyle and the beautiful location which I lived. Having people look at me and expressing how lucky I was to live in such a place gave me good feelings about my self, what I was doing, and that I was lucky to be in Jasper at that time. Riding a mountain bike seemed to add to the mystique of living in Jasper and added to the appeal of this lifestyle.

Trail bicycling for recreation was different than commuting in town. I found myself trail riding to clear my head, get some exercise and see the the natural beauty of Jasper. There was a definite distinction between riding a bike in town as a practical mode of transport and the feelings of riding on a natural trail. The closest experience similar to trail bicycling would have to be the experiences of nordic skiing on similar trails. The trails were refreshing and stress free and gave me time to think about what ever was on my mind. Hiking the same trails may have given the same feeling but would have required quite a bit more time. Bicycling was not only faster, but as mentioned earlier there is more of a flow with the wheels rolling over trail obstacles. Unlike hiking, short downhills gave feelings of speed and were effortless. For me, uphills were also attractive for building strength and endurance, setting a pace and gave a sense of accomplishment. The mixture of physical effort (on hills), the thrill of short downhills and the attractiveness of the surroundings all played a part in the appeal of trail bicycling. If I had to choose which aspect was most attractive I would have to choose the scenery first and hill climbing last.

Riding on fire roads could give the feelings of naturalness as long as the roads have been allowed to grow over with vegetation. Single track (narrow single paths) gives a more natural feeing which, for me, is more appealing than riding on a road or former road. However, when riding with other people, I found people like to talk and prefer to ride side by side. Fire roads are more appealing for the more "social" ride since they allow the bicyclists to talk and ride at the same time. It is very difficult to hear someone when they are ahead or even behind you. You have to shout to make yourself heard especially when there is extra noise from the wind and noises from improperly tuned bicycles. Yelling back and forth is not my type of relaxing activity, therefore

when riding with groups on a social trip I prefer wider trails and fire roads. It would be the same for hiking. Trails are also much more preferred than riding on a paved road or highway. The feeling of being immersed in nature and focusing on the sights, sounds and smells of nature is lost when the majority of time you are looking at paved road in front of you and your attention is needed to watch out for fast moving cars. The sounds of traffic also takes away from the experience. Being aware of automobiles while riding on a bicycle would be similar to the feelings a hiker or slower moving bicyclist might have with the faster moving bicyclists. Part of the experience is lost; there is not the same intensity of involvement, when time is required to look over your shoulder to watch for other users.

One very quick way of losing the feeling of being a part of nature is being startled from another trail user. Using bicycles has the greatest potential for startling someone because of their speed and quiet nature. I have been surprised by other trail users a few times, so to prevent my presence from taking away someone else's experience, I have made sure people know when I'm approaching on the trail. Whistling was my favourite method of letting someone know I was there, until I bought a bicycle bell. Now I use a bell sporadically while riding to let people and bears know that I am in the area. While in Jasper, few other people were met along the trails so this never became a problem. The experiences I obtained while trail bicycling in Jasper were very positive. With limited contact with other trail users, let alone conflicts, trail bicycling was considered an enjoyable and time efficient way to move about the trails. While trail bicycling I was given a chance to see the backcountry, at times have fun with downhill pitches, had time to myself, felt apart of nature, spent time with others, and felt good about getting some exercise. For the experiences I had with trail bicycling in Jasper I would consider this activity very much appropriate for the mandate of Jasper National Park. For the activity I participated in, it is equivalent to hiking and nordic skiing in Canada's national parks..

This section expressed the personal experiences and participation of the researcher in Jasper National Park. My views are not necessarily held by the majority of trail bicycling participants, nor do they represent them, but they are one person's experience and may be shared by others. The intent of this section was to describe the perceptions and attitudes of one person to act as base data and information when interviewing other trail users in the national parks. The interviews of other trail participants will be the data which will form the theories of the experience of trail bicycling and the potentials of trail conflicts.

4.4 SUMMARY

This chapter has presented the context in which trail bicycling occurs in national parks in Alberta. Perceptions of trail bicycling and bicyclists are created from media images as found in Alberta and in the American context. Information from magazines and newspapers have portrayed mountain bikers as both counter culture and mainstream. Mixed messages about the people and the activity of trail bicycling are quite evident and may fuel the negative perceptions towards bicyclists. The research described here suggested that people have certain expectations about trail bicycling and dependent upon their beliefs about national parks will determine if they experience conflict or not. Trail bicycling, as observed in the field, appears to be an appropriate national park activity, which is becoming very popular. However, images in the media (especially in the American context) and word of mouth comments suggest that trail bicycling poses a problem for traditional park experiences and therefore should be managed accordingly. The next chapter will present the views and attitudes that trail users have towards the issues of trail bicycling and conflict.

CHAPTER FIVE

DATA PRESENTATION-FIELD EXPERIENCES

5.0 INTRODUCTION

This chapter is divided into two main themes; experiences of trail bicyclists and the perceptions of trail users towards recreation conflict. The data was collected from the perceptions of interviewed people and to a lesser degree from participant observation. Bicyclists explain the various motives for choosing this trail activity, and for choosing national parks The chapter is organized as a series of sub-themes based on the issues expressed by trail users in their own words. Prior to presenting bicyclist's motives and experiences of conflict, this chapter will address the issue of mountain biking and bikers as a social image.

5.1 "MOUNTAIN BIKERS"- IMAGE AND LIFESTYLE

A mountain biker is a person who rides a mountain bike. It does not necessarily mean that this person is also a trail bicyclist. The reasons for choosing mountain biking as a source of outdoor recreation appears to be twofold. The first is an image created from the media and history of mountain bikers that makes owning a mountain bike attractive for social reasons. People who are attracted to the "mountain biker" image as a social symbol were not found on backcountry trails. For this reason they are thought to be less likely to put their effort towards riding on national park trails and therefore are not the main concern for this research. Although, social image riders are not the focus of this study, they will be briefly mentioned because of their influence on the perceptions of trail bicyclists. The second group, who are of concern for this research, are those people who choose trail bicycling as their form of recreation.

Stemming from what was already mentioned about media images and the history associated with mountain bikes, a person can create a lifestyle image by saying they own a mountain bike. A person can be given this image without actually riding on the trails but by simply owning a piece of equipment (McIntyre and Pigram, 1992). Although mountain bikes are no longer viewed as a fad, the symbol of the mountain bike is still used by some people to define a social group. There appears to be two groups that use a mountain bike to represent their lifestyle. Some younger participants, in their teens and early twenties are using the mountain bike as a source of transportation in their attempt to define a fringe group. This idea of the bicycle as a prop to make the owner socially acceptable is confirmed by the observations of a long time resident of Banff. He explains:

> Most of it though is an image thing. ..There are very few bikers that regularly ride on the trails. They are used mostly as transportation around town. Summer staff are getting bikes for cheap transportation, not cars, it's something everyone has to have to be part of the "in" crowd. You have to be a skier and you gotta have a mountain bike.(Field notes: Dave, July,1991).

The researcher observed the same for Jasper, where seasonal employees and bicycle renters were mainly using their mountain bikes as transportation on paved roads. Expensive brand name mountain bike equipment with the latest gadgetry is also predominant on paved roads and urban trails, such as in Edmonton, where this equipment is more of a visual symbol than an activity necessity. High school and university students, as well as locals in Jasper and Banff, use the mountain bikes as affordable transportation and gives their owners an image similar to those of the original mountain bikers. The "anarchy" image as described by Kelly (1990a) or as Patrick (1988) labels "freedom seekers" or "new age hippies" is the image that is desired by this group.

A good example of this is Mike who lives in Edmonton. He has achieved a certain social status with his peers by being an owner of one of only two certain brand name bikes in Alberta.

Mike owns a very expensive and odd looking bicycle and is often stopped and asked about it's innovative design, not only by others in his social sphere but by main stream bicyclists. It is very obvious when talking with Mike that he loves the recognition and attention he gets from owning such a rare mountain bike. He enjoys the recognition of an alternative lifestyle that he receives because of his interest in mountain biking, and other lifestyle images of skate- and snowboarding as well as the alternative music scene. He also enjoys and receives recognition from his peers for his long term commitment with mountain biking, where he claims to have cut one of the most popular trails available in Edmonton, and his knowledge of the new innovations and trends of the bicycle industry. Recognition is also achieved by working in retail sporting goods stores and a membership with a racing club. Both his work and club affiliation have the perks of obtaining, relatively inexpensively, the newest equipment on the market therefore making him even more socially acceptable. Mike is a good example of Bryan's (1980) theory of specialization where club affiliation and focus on equipment, therefore specialization, have given Mike a sense of identity and high social status within a group to whom he wants to belong and be identified with. The mountain bike image, like Mike's, can also be obtained by a rider's technical skills (Bryan, 1979) where riding fast and difficult trails, usually in urban locations, is common place.

The second social group that Patrick (1988) identifies as being associated with mountain bikes are the baby boomers. The majority of bicyclists using the trails during this study would fall into this age category. Most bicyclists would be considered "baby boomers" ranging in age from their mid twenties to their forties and older. However, the reasons for trail bicycling are not for the consumerism and image of "new aged hippies" as identified by Patrick, but were for motivations of enjoyment and as a result of limited leisure time.

5.2 MOTIVATIONS FOR TRAIL BICYCLING

Choosing an activity for outdoor recreation, and mountain biking is no exception, is made deliberately. People choose an activity or an experience because of the satisfaction and expected personal benefits for participating in certain activities (Schreyer and Driver, 1989). This is especially true, because of the deliberate choice being made, when an outdoor education group must make a group decision to choose one or a group of activities, with the exclusion of others, for their practical trip. An outdoor educator (Field notes: Sept.,1992) explains how their group chose a bicycling/hiking trip over canoeing and other types of trips:

> Cycling was attractive to a large segment of the group because it was something everybody could do, ... fitness tends to separate people in a group, skill won't as easily, so (for) something like canoeing; some of the folks didn't have as much experience canoeing and some people wanted to paddle (a) white water river, (other) people were less comfortable with this....The other thing about mountain bike tripping is that no body in the group had really done any overnight tripping with bikes.

This outdoor education class made a deliberate choice for mountain biking over other forms of outdoor travel for a number of reasons. Their democratic choice was made by choosing an activity which was: 1) considered to be a novelty for each of the participants; "for some folks it was novelty, the route that was proposed looked really interesting to people plus the idea that it could be easily combined with hiking." (Field notes: Outdoor Educator, Sept.,1992), and, 2) there was a need to choose an activity that was accessible for a variety of skill and fitness levels.

> Some of those folks aren't really fit. And a lot of people, by our age have knee problems and carrying a full pack and walking down mountains with that pack tends to exacerbate knee problems. Cycling is a lot more gentler on the joints when you're going down hill. It's as hard or harder work going uphill and if it gets steep you're off the bike pushing it (Field notes: Outdoor Educator, Sept.,1992).

The choice was not solely based on the type of activity but also on the location the activity could take place and the ease of obtaining equipment. The leader explains:

> As I said . ... The areas was of interest to people, and we kind of went with an activity and a particular trip or two in mind. So in part the route was attractive for folks going to Banff and Mt. Assiniboine. .. Most people had a bike or they could get one. I think we ended up only outfitting one or two people with bikes, so it's indicative of how popular mountain bikes are. I know about 75% of all bikes sold in western Canada are mountain bikes these days. and with the group that is kind of outdoor oriented, by this time, most of them have already bought their own mountain bike. The fact that most of them had a mountain bike but hadn't been on a overnight trip was kind of significant (Field notes: Outdoor Educator, Sept.,1992).

Mountain bike trips are chosen for the activities ease on the body, the fact that many people already own the necessary equipment and the versatility of combining biking with hiking and other activities. This was also true for people living in Jasper where a bicycle ride was often the choice of a quickly planned outing. Bicycling was something most people could do, people already had the necessary equipment, and a bike trip would fall into the time parameters of an evening or weekend trip. Fryatt Valley trail was a common destination where a bicycle could make this normally three day trip considered "something of a long, tedious grunt" (Patton and Robinson, 1986:162) into an enjoyable combination bicycle and hike, less physically demanding, weekend trip.

5.2.1 On The Trails: Sport or Wilderness

Since the majority of mountain bike owners do not ride on mountain trails, there is a divison of bicyclists into trail and nontrail bicycle riders. Trail users are further divided by the personal motivations for experiences each person seeks in riding their bicycle. One bicyclist, when asked to describe mountain bikers, described an experience dichotomy of trail bicyclists:

> Mostly, fairly young, mostly male, ... split between what would be termed "sport" riders, people who are doing it for the sport value of it and people are doing it for a "wilderness" activity, you know, backcountry recreation. They are quite clearly distinctive: they (sport riders) are riding fast and concentrating on the trail immediately in front, then you see people sitting up looking at the scenery not worried about covering ground very fast. Sport riders come from town (Banff) and quite a few from the city, Calgary. There's is a pretty responsible and mature group from the city since its not so high profile. (Field notes: Dave, July,1991).

This person perceives bicyclists to be motivated by an either/or model where the motivations for bicycling are for either (1) the sport; riding fast and challenging the self to a difficult trail, or, (2) the nature appreciation activity. While some people would categorize themselves as one or the other, the majority of bicyclists observed on the trails and self-described through conversations are attracted to a combination of recreation experiences that not only include physical fitness and stimulation associated with sport riders, and enjoying nature but also involves benefits as identified by Schreyer and Driver (1989) such as personal development, social bonding and experiential reasons.

Many people choose trail bicycling for the same experiences as they would for initially choosing hiking. The specific experiences are not identified but the connection with hiking became apparent with the number of bicyclists who said that they were previously hikers. A couple from Ottawa expressed their change from hiking to bicycling when they found out they could still see the same scenery while on a bicycle.

> Their desired experience was to see the sites, they have a limited amount of time so the bicycles have helped to let them see what they can. ...They said they no longer hike since they have taken up bicycling" (Field notes: Ottawa couple, July,1991).

Changing over to trail bicycling from hiking and then limiting the experiences to bicycling has also been expressed in conversations with a former backpacker/doctor from Rocky Mountain House and customers at an outdoor store. The substitution of bicycling for hiking suggests a substitution in these two experiences, where a person can achieve the experiences of hiking through participation in trail bicycling. The researcher expressed this exchange of values when describing bicycling, where he "could get the same feeling of "wilderness" as (he) would have done by walking" (Field notes: Jasper,1989). However, substituting one activity for another does not identify the specific experiences that can be achieved from hiking or trail bicycling.

The experiences achieved through trail bicycling participation is as varied as the preferences of other trail users. While "relations with nature" is a very common theme expressed by trail bicyclists, it is often mentioned with other goals for a particular trip. At the Lake Minnewanka trail head, an Edmonton family expressed their motives for trail bicycling in this area by listing: "wilderness, peace, challenging and nature" (Field notes: Edmonton family, July,1991). They also liked the location; Banff, for its variety; in the types of trails and the kinds of activities in which they could participate. In addition to trail bicycling this family enjoys hiking, horse back riding, and a "cabin" in Canmore. This family's choice of location and activities suggests their preferred benefits are social bonding, stimulation, experiential and relations with nature. Trail bicycling is considered an appropriate family activity that can substitute or compliment the traditional park activities of hiking and horse back riding. This is not an isolated case since another couple from Edmonton expressed the substitution of bicycling with hiking and horse back riding (Field notes: Edmonton couple, July,1991). This couple, however added another dimension to substituting trail bicycling with the traditional trail activities with their experience of overnight camping with bicycles. With the overnight camping factor trail bicycling becomes more like backpacking and only differs with the mode of transportation. For this couple, backcountry bicycle camping gives them experiences that are in addition to day trips. According to the couple they are prevented from their desired experiences by a need for more areas that are not too difficult (not too many roots or rocks) and would allow for a good ride. A good ride is considered as one that would have a circle route and would accommodate overnight camping. A great deal of commitment is required by bicyclists who camp in the backcountry because of the difficulties required in packing and the physical strength and skills for riding on rough ground with full gear. Many people voice an attraction to camping with a bicycle, although very few people actually participate in this activity.

The substitution of trail bicycling for hiking is often questioned by non-bicyclists who believe bicycling requires more concentration on the trail in front of the participant than with the natural surroundings. For this reason hikers believe bicyclists are not on the trails for the same reasons as the hiker. When the researcher asked a multiple activity trail user: "Do you see as much bicycling as you do hiking?" The answer is surprising for non-bikers.

> Some places yes, some places no. If the trail is fairly smooth, then I see a lot and if it's really rocky, requiring my attention to be able to bike, I don't see as much. You have to stop more often in those situations and look around. Take pictures. ... I go into the mountains to experience the mountains. I like the physical part of it. I like feeling I've done something at the end of the day. But... the fact that I can so easily combine with hiking. Like I can use the bike to go up a gentle valley up to a base then I can hike up on to some peaks and the views from there. Or just sit in the bush somewhere and look at the flowers (Outdoor Educator, Sept. 1992).

Based on this quotation, it would appear that the experiences of trail bicycling and hiking can be the same. Since these activities may offer similar experiences it is not surprising the transition many trail users describe. "First of all I was a big hiker and cross country skier. I started mountain biking and still hike." When asked "Why did you change over to mountain biking?" he replied, "Because when the trails are boring you can get through them fast and you can get to the interesting things quickly "(Field notes: Boston, July,1991). Few trail bicyclists said they made the transition from road bicycling where the benefits are speed/stimulation and physical fitness oriented. Road bicyclists are unlikely to be attracted to the much slower and rougher ride associated with trail bicycling, especially in the mountain parks.

The attraction to trail bicycling has also been expressed as the benefit of new experiences and change. An Edmonton family expressed they would like "more trails for variety" (Field notes: July,1991), and a returning park user explains his trail choice is for trail variety; "there's a lot of different terrain along the Overlander trail, its kind of a pleasure to go on it. (Field notes: Boston, July,1991).

Other bicyclists simply want to reach areas of scenic beauty. A bicyclist on the Redearth Creek trail said he "enjoys the scenery" (Field notes: July,1991), and that is why he goes to Mt Assiniboine "with it's open alpine areas" He does not like the less scenic fire roads where "he can only see the trees". He also mentioned the view and seeing grouse as motives to visit the Mt. Assiniboine area trails. These benefits could have easily been given by participants in other trail activities such as hiking. However, this bicyclist has mentioned, in addition to the natural setting benefits, coming down was another incentive for riding to Assiniboine (Field notes: Redearth biker, July, 1991).

Trail bicycling participants differ from hikers in the emphasis they place in their descriptions on the excitement and enjoyment associated with movement, and it is for this reason that bicycling should be considered more that just a quicker form of hiking. In the words of one bicyclist, "I like to bike because it's easy movement. I know you have to work at it but I don't consider it work. It's fun." When asked "Is it like driving a car?" her reply was "No its more like hiking. You are self propelled, you get a sense of accomplishment by doing it yourself. It is faster than hiking and gets you there quicker" (Field notes: Susan, Aug.,1992). Trail bicyclists consider themselves as self propelled like hikers, but place more emphasis on excitement and movement.

A common misconception of non-bicyclists is that the "fun" benefit or excitement of motion and speed outweighs the enjoyment of nature benefits. Although it may for the "sport" bicyclist, groups met on the trails were not caught up in speed aspects of trail bicycling, as suggested by the media. Bicyclists are not always in constant motion, as explained by an outdoor educator, "people were stopping, taking lots of pictures and stopping and resting, talking. You don't move very fast with a group that size" (Field Notes:Outdoor Educator, Sept.,1992). The speed of the bicyclist and attention given to a person's surroundings is dependent on the individual, not the activity of trail bicycling.

In addition to the enjoyment of trail bicycling as a recreational activity, bicycles can also be used as a form of transportation, as a means to a destination to participate in other forms of outdoor recreation. People in Jasper have used their bikes to get to locations to go swimming and rock climbing (Field notes: Sept,1989), while in Banff, one resident reveals bicycling has assisted with his passion for fishing.

> I go out a lot (fishing) I bought a second bike to do that. Its set up a little different. Mainly I put a drop handle bar, a 10 speed styled bar. I jokingly call it my "fishing Bike"- It's super for fire roads- Quite a few people go fishing, a very underground group, you never see them, they don't really tell people what they are doing, they just go about their business quietly (Field notes: Dave July,1991).

Trail bicycling therefore can be an end in itself as the examples of benefits have shown, may be a means for some other end such as in fishing, and may be a combination of the two, where the participant may derive benefits from using the bicycle as a means, to get benefits once at the destination, and as an end, achieving benefits as the bicyclist moves about the trail.

A Redearth bicyclist mentioned the return trip "coming down" as an expected part of the trail bicycling experience. Another bicyclist said his reasons for selecting these backcountry areas are not only for the "scenery and the high country" (Field notes: Boston, July,1991), but also stated the attraction to the more "sport" aspect of trail riding or what he termed the "thrill" of the downhill.

> Yea, the other thing is the thrill aspect. Obviously, I'm not the type of person who likes to take a mountain bike, certainly at my age (He's 51) ...I wouldn't at any age, go down talus slopes with mountain bikes, and (he wouldn't consider) extremely rough stuff, (or) tough stuff. No way! I like these (trails) smooth ..like..the Redearth creek fire road is excellent. You get your thrill coming out, you bounce around, you know its an obstacle course. Okay, coordination, you're using your body, you're using your reflexes, your attention, mind. I mean its kind of a holistic thing. You know. As much as cross country skiing. Hiking is too slow (Field notes: Boston, July,1991).

He further explains the thrill of riding downhill as a "rush" but was quick to point out it was not his style to ride out of control. "I'm not a bungee jumper...I'm too temperate for that type of thing. I'd like to live long enough to do many many things" (Field notes: Boston, July,1991). Other bicyclists echoed this sentiment where they felt speed was okay but courtesy on the trails was a must (Field notes: Ottawa couple, July,1991). Speed and the excitement involved with downhills in moderation was acceptable for most cyclists. However, older bicyclists, more so than younger ones, were more often to mention that their goal was for nature appreciation more so than the thrill of the downhill. Steve considers himself a camper first and foremost and a bicyclist second. "I enjoy backcountry camping and the challenge of getting up the hills. I'm too old to go fast and get the thrill of the hills. I'm pretty cautious on the downhills (Field notes: Steve, Aug., 1992).

Special skills to ride over rocks, roots and other difficult terrain is considered technical trail bicycling. Like downhill sections, technical trail sections are desired by riders for excitement and personal challenge. An outdoor education leader describes an unexpected technical section with an overnight bicycling group:

> It was really tight, big rocks, and really really challenging. And we had ... pretty full gear on the bikes. ... It was the highlight for them. There was this really technical section. And I stop and explain how to ride a particular section. Hang your butt off the back of your seat, and use your brakes but not over use them and how to shift your weight when you are going to ride up. Talk about cornering and balance and stuff like that. They got into it. They were all like a bunch of twelve year olds, riding in a ravine, on the technical section of the trail. They really liked that part. And here I was apologizing "I'm sorry it was suppose to be a fire road, and I asked them (parks) I did everything I could." Here you're bouncing around, chains are coming off, and all kinds of shit. They didn't care, they loved it. It was a highlight for everybody. It was the first day, the first section of trail, being that technical, really got people's heads into mountain biking and how much fun it can be. And the idea that the rest of the trail was fire road so you could be looking around, talking and visiting, but when you're riding a technical section of trail, it's just like being down in Canyonlands, you're totally focused on what you are doing, you don't have the time to look around at the scenery or doing other things and I wouldn't want the whole trip to be like that, because its really important for looking around to appreciate the place. And physical activity in the mountains isn't appropriate in the national park. If you're there to peak bag, again, you know, to challenge yourself physically, well you can do that at the climbing wall here or you can do that riding around in the river valley in the city. You don't need to go out and trash mountain trails (Field notes: Outdoor Educator, Sept., 1992).

Technical sections, as well as downhill sections, are desired aspects of trail bicycling. The added fun and excitement that can be experienced on a bicycle, especially in areas that are considered "boring" or having limited scenic quality, are not available for hikers. The researcher noticed his own motives for bicycle riding changing from enjoyment of nature and seeing sights to more stimulation benefits when the scenery became monotonous and unvaried. The amount of "excitement" added to trail bicycling will depend on the setting (experiential and nature benefits) and the attitudes and skills of the bicyclist. Beginners to this activity are more likely to be more apprehensive about technical skills and the thrill of the downhill. "I don't really like the downhills or speed with the bikes. but I do like where the bikes can bring you" (Field notes: Susan, Aug.,1992).

The "thrill aspect" of bicycling was often compared with the experiences of nordic skiing. Trail riders in the mountain parks see them-selves more as nordic or backcountry skiers as opposed to the more "thrill seeking" alpine skiers.

> Absolutely, it's that difference. Both are fun and both have their place. Nothing wrong with either of them. They're just really different. And you would hope that more people would get turned on to the travel (and) exploring and biking is one medium to get into it. Get into places that they may not be able to walking. due to time restraints or physical limitations. There are some potential advantages there (Field notes: Outdoor Educator, Sept.,1992).

Some trail bicyclists see themselves as being similar to nordic skiers. The nature of these two activities are thought to provide the same benefits, give the same experiences, and as a form of exercise require similar physical fitness. The notion that nordic skiing and trail bicycling were considered alike became very obvious with the following reply from a bicyclist, who was asked if a trail they had biked was scenic and if they would have hiked the same trail:

> I'd ski it, I don't know if I'd hike it. (what's the difference between skiing, hiking and biking?) You go faster skiing. If there aren't as many spectacular views I'd rather

> ski it. The terrain is nice for skiing. Generally hilly and generally downhill ... its a 40 km stretch. without any really interesting points. You have Spray road right there. There's no place to go from there. So I probably wouldn't hike it. I'd ski it because I could ski it in a day. It would be tough to hike it in a day though. Its a pretty long haul- as it was. Other parts I'd certainly hike (Field notes: Outdoor Educator, Sept.,1992).

This same person was then asked what the attraction was to mountain biking, what was the desired experience? The answer again included the experiences of both nordic skiing and trail bicycling:

> There's a few different things. I really like to explore areas, and not be as tired at the end of the day. beating my knees and feet on the way back down as in hiking. Probably the same reason I like skiing; my first passion in life. I live to cross country ski in winters and cycling is really complimentary to that in terms of the physical part and the emphasis on the quads, leg injuries, and balance and those kinds of things.... I get to see more country. Get to more view points in a day than if I was hiking. Its a comfortable way to travel. You know, I can ride my mountain bike all day and not hurt. Which is nice (Field notes: Outdoor Educator, Sept. 1992).

The "comfort" of nordic skiing and trail bicycling becomes prevalent when traveling in the Rocky Mountain parks. Most trips into the Rocky Mountains involves gaining altitude on the way in, and a predominantly downhill ride on the way out. This is true for hikers, nordic skiers and bicyclists, anyone using the mountain trails. The difference between these activities is that hikers must still work on the return trip, and for some trail users the pounding a person's body takes on the descent (knees are the biggest problem) is sometimes more punishing than the ascent. As mentioned earlier an outdoor leadership course chose bicycling for their trip because it was one of least body (knee) damaging activities (especially going downhill) and required fewer technical skills (Field notes: Outdoor Educator, Sept.,1992). Bicycling and nordic skiing allow their participants to ride down the mountain trails at the end of a trip, a time when most people are tired from the earlier climb up into the mountains.

Bicycling, like nordic skiing, is often thought of as a sport where participants are motivated by technical skills, speed and competition. However, very few "sport" riders were found on the backcountry trails during the time period of this study. There may be two reasons for this. First,

sport riders prefer the smoother, "faster" trails that are found elsewhere such as at the Canmore Nordic Centre and in Kananaskis.

> Drew has become involved with mountain biking to train for triathlons. His friends mostly ride in Kananaskis and in Canmore. The reasons given for these locations was simple. They are closer to Calgary and the trails are more groomed making it easier and smoother for training (Field notes: Drew, July,1991).

The second reason is that this research focused on the trails that are considered as "wilderness" or backcountry. The trails found in or near the townsites, although natural in appearance, were considered inappropriate because they were thought to provide an experience similar to city trails and not a national park experience. This postulate was confirmed by a Banff bicyclist's perceptions of local riders.

> The hard core riders from Banff ride the immediate townsite trails which are open without exclusion. ...(also) if its an after work ride we do a lot of the townsite trails for an hour, an hour and a half or two hours. Lately we have been putting a series of these together so you can get out for 50, 60 kms in the immediate townsite area and never going more than 5 miles away from the townsite (Field notes: Dave, July,1991).

Some local riders use Banff's townsite trails, as an Edmontonian would use the River Valley trails, for physical exercise and possibly for the excitement of riding fast and aggressively. The reason for riding is not necessarily for a national park/wilderness experience and for one Banff resident, this is true where bicycling is a form of excitement:

> The activity (hiking) isn't as exciting. Hiking is getting to a place. Cycling itself is exciting. It doesn't have to be a beautiful trail or any great scenery. It's the activity itself that I do it for. There is a lot of people who do it the other way: (where) it's mainly the access (Field notes: Dave, July, 1991).

However even with his recreation goal to achieve excitement, this mountain biker has changed his activities to adapt to changing parks policy towards trail bicycling. He said he has changed his bicycling from simply riding the trails to biking and fishing. The reason for this is that "he has

ridden all of the trails available in the Park" (Field notes: Dave, July,1991). Also he no longer gets the same thrill from riding the same trails; familiarity has led to a change in his goals. In addition, the problems of enforcing park policy has led this biker to change his recreation habits. "(W)ith more days off I've been doing more hiking (because) I know the wardens, I'm not willing to take the chance to be caught at someplace we're not suppose to go." The benefits of an illegal "sport" ride, at least for this particular Banff local, does not outweigh the consequences of being caught.

The trail bicyclist who rides for a "sport" experience, although motivated by speed and stimulation, does not obtain the same experiences from riding on a paved road.

> On fire roads and single track- It's all riding. It's what ever you feel like that given day. Fire roads aren't the most exciting but they are a lot nicer than paved roads because you don't see any traffic (and) you don't have to deal with cars or trucks. And its very secluded you can cover a lot of ground in a day (Field notes: Dave, July, 1990).

Trail bicycling for any experience is not mutually exclusive. A bicyclist who rides for the scenic views or for the experiences similar to nordic skiing can at a different time and place ride for the "sport" benefits. An outdoor educator rides predominantly for experiencing a "national park" but has bicycled for other reasons such as in a well known mountain biking destination in Utah. He explains:

> On the slick rock trail in April, it wasn't Easter and there were a thousand people on the trail that day. A thousand people! I couldn't believe it. It's more like a gymnastics exercise. its the fun technical kind of riding. Scenery is okay, not outstanding. The scenery would not draw a thousand people a day. Its the technical thrill of the ride. The physical experience....I was there and knew what the trail is all about and I'm going to get the best ride out of it and have a good time. And I did. Other days we biked a trail near Arches, dumped our bikes in the bush somewhere and hiked in for two or three hours, and them came out and use the bikes almost as some commuting machine. Although the riding was fun there too... and interesting (Field notes: Outdoor Educator Sept. 1992).

Finally, a bicyclist describes the reasons for participating in trail riding: "I ride for the technical, weaving around rocks or on curbs in the city; for nature, the scenic value; and for

exercise, and to test myself with a physical challenge (Field notes: Mike, Sept., 1991). Mike choses trails and rides his bicycle on the trails according to the type of experience he wants for a particular trip. One trip may be more nature oriented, where his mood and the terrain allows for this type of experience and a less scenic area may cause Mike to ride more aggressively to challenge himself and obtain a different type of trail riding experience. The trail conditions will dictate if a "technical" experience is available or not.

This section has presented the many different motivations people have for participating in trail bicycling. Although trail users have expressed expectations for "thrill" aspects such as going downhill and moving quickly through a wilderness setting, most participants expressed motivations for a traditional park experience. Bicyclists expected to experience the scenery and the feelings that are associated with hiking and nordic skiing. Motivations and emphasis on specific motivating factors were not mutually exclusive and were varied for trail bicyclists. Experiences, having differing motives, appear to range from a pure "sport" activity to a nature appreciation activity, with the majority of trail bicyclists positioned somewhere between the two extremes. The motivations given by current trail users for trail bicycling do not suggest inherent conflict between trail bicyclists and other trail users.

5.2.2 Non-Activity Motivations

Motivations for trail bicycling in national parks are not limited to activity oriented expectations but will also include motivations for attachment to place, setting expectations and social bonding.

Bicyclists, like other outdoor recreation participants develop attachments to a place or to specific recreation resources. Jacob and Schreyer (1980) call this resource specificity. A good

example of this is a returning tourist from eastern Canada who explains his choice to bicycle in Banff over Kananaskis:

> Kananaskis is not its beautiful by any standards comparable to anything in the east. But there's something special and unique in these parts (Banff) close to the continental divide. ... Well, one thing is its lusher, not as dry (Field notes: Boston, July,1991).

This quote describes a bicyclist's attachment to the landscape and scenery in Banff, a recreation resource, which he prefers and selects for his recreation. His attachment to Banff is based on his expectations of the scenery that he will find there. This bicyclist also exemplifies the attachment to Banff as a place. He has developed a sense of possessiveness to Banff, a place he considers home:

> I keep coming back for vacations because you can't beat the Rockies for outdoor life. Certainly far ahead of the east. ... Because of it's beauty, and so much to do. I know Banff park, it's like home. It's a familiar thing. I have a strong affiliation in all four mountain parks (Field notes: Boston, July,1991).

A person may have an emotional attachment and/or a functional attachment with a setting as mentioned in the literature review of this study. An outdoor leader explains their group's decision, where the decision is based on first a symbolic attachment to the place (emotional attachment) and secondly of the attributes of the setting that were attractive (functional attachment) for the expectations for this particular trip:

> For some, it was the name: Mount Assiniboine, the Matterhorn of the Rockies. They've been skiing at Sunshine, you can see Assiniboine off in the distance. And someday hope to get up there. ... or hearing about the lodge up there. And I'm sure for a couple of them the idea of "snivelization", you know in the middle of a long trip was probably, at least the confidence with a place with a radio, and hot tea and stuff like that was attractive.... (Any significance for Banff?) I don't think so. We would have gone to any of the national parks. And for some of us Banff was a turn off these days. Most of the trails are kinda over used and Banff townsite has little attraction to us. So I don't think Banff itself was any great attraction. More so than Jasper, Waterton (Field notes: Outdoor educator, Sept.,1992).

Trail users have also developed attachments to places because of what they have learned to expect with the designation of an area. Banff and Jasper National Parks are often considered as scenic mountainous areas that are managed at a high standard and are governed by strict regulations. A neophyte trail user understands the appeal of the designation of a national park but not necessarily the park mandate to preserve and protect a unique area. A second-trip bicyclist explains this view:

> I haven't really thought about national parks as being special. I didn't think of them as "national parks". They were places that were well cared for, and had wardens, therefore it was a safe place. I haven't been to any other parks. I've been to Kananaskis (just driving through) but I thought that was a part of Banff. When I think of Jasper and Banff, I think of the mountains, camping and spending time outdoors (Field notes: Susan, Aug.,1992).

Hikers also attach specific attributes of an area with a national park designation. "I like national park trails best. Other trails appear too urban and over used. You see too much erosion and damage on them" (Field notes: Maggie, July,1992).

A national park designation attracts people who expect certain attributes, such as the bicyclist who expects the parks are "well cared for" and "safe" and the hiker who expects "natural" and "remote" in these parks. However, a national park designation also causes displacement for participants who prefer more freedom and personal choice.

> He said he was going mountain biking to K- Country. I asked why there and not Banff. Banff, he said, was too crowded, and too many restrictions. Kananaskis was ideal. You can go anywhere and there are fewer rules about where to go and where to camp" (Field notes: Sept. 17,1991).

In addition to a park's regulations, trail bicyclists have chosen not to ride in Banff because of reasons of distance, functional attachments and emotional attachments. A displaced bicyclist explains his and his friends choice:

> We don't like to ride in Banff. The park is too far and is not the first location that pops into mind when thinking about mountain biking. Kananaskis Country is the location of choice for several reasons. First, it is quicker from Calgary to drive to Kananaskis as compared to Banff and two the trails are wider. This makes the trails easier to ride and less dangerous. There's no blind corners. The trails are also in less severe terrain. The trails are on rolling hills. They 're less demanding physically. Banff has higher altitudes and steeper grades therefore requires more stamina and strength. K Country is also thought of as the place to bicycle. Banff is the place to alpine ski, not to bike (Field notes: Bob, July,1991).

In addition to the expectations of a park designation, the choice of a specific setting, such as a trail, helps to identify the potential experiences of an activity. A choice for a specific trail is based on the opportunity that the trail will fulfil a desired goal or expected experiential outcome. An example of this is a bicycling family that chooses routes that avoid linkages to roads for the safety of their children (Field notes: Edmonton Family, July,1991). Riding on paved roads with automobile traffic, for this family, takes away from the desire for a relaxed nature experience. The experience of riding in the city is not the same as riding for a natural experience in the mountains. "I enjoy riding a bike. It's not the same in the city. In the mountains you don't see many people. Therefore it's more relaxing. It's also more scenic and challenging because the trails are not straight and paved (Field notes: Susan, Aug.,1992). The setting selected for an activity plays a major part in the benefits experienced with each outing.

Some bicyclists prefer trails where the experience is much more like hiking. "I like the idea of wide road-like trails, since you're not having to concentrate on technical riding. You can talk to others and look around" (Field notes: Susan, Aug.,1992). The difficulty of trails does present an experiential barrier for the bicyclist who prefers less technical rides. A bicyclist has excluded trails in Jasper and the Lake Minnewanka trail because they are too technical and too hard on his arms. He said they were "not really worth it" (Field notes: Redearth biker, July,1991). He has been told of the less demanding rolling hills near Bragg Creek, which are more to his liking.

Another reason for participating in outdoor recreation, like hiking and trail bicycling is social bonding (Schreyer and Driver,1989). An observation of trail users found that trail users are more often than not in social groups of two or more people. Hikers and bicyclists in this study were no exception, being often seen in small groups of usually two to four people. Although hikers and bicyclists appeared to be similar, there was a difference noticed between these two activities. Large groups of trail users were more often hikers and solo participants were trail bicyclists. The Mount Shark area, a staging area for access into Banff and Mt. Assiniboine, was one location where the researcher noticed the composition of social groups using the trails. During a Sunday, the following groups were observed using the trails (Field notes: July 20,1991):

> a very large "church" group of more than sixty people out for a day hike; a rare group of two women, two men, and four children all on bicycles with a man on horse back; an organized backcountry hiking group comprised of three groups of approximately twenty elderly people; a train of six horses and two handlers bringing out the hiking club's equipment and supplies; three groups of two hiking, two groups of four hiking, one group of eight hiking, two groups of two bicycling, an educational group of ten bicycling and hiking, and a solo bicyclist.

The large trail groups as observed on this day were not a common occurrence for other locations in Banff National Park. When comparing hikers with bicyclists, hikers appear to socially interact more: walking side by side and talking, more so than bicyclists. A beginner trail user explains: "I like hiking better than biking. You spend more time talking and looking around. It's more social when you're hiking" (Field notes: Susan, Aug.,1992). It is much more difficult to maintain a conversation on a bicycle, especially on a narrow trail, therefore bicyclists are less social than hikers while moving along a trail. Students in the the outdoor education class were happy to be separated on the trail; "for a lot of us we have been together for three long weeks, all day every day, so the notion of being able to get some quiet time, or semi-quiet time was pretty desirable to some people" (Field notes: Outdoor educator, Sept., 1992).

The nature of bicycling, being a less social activity than hiking, has allowed trail users to participate in solo day trips. While no solo hikers were seen during this study, a number of solo bicyclists have been observed using the backcountry trails. Solo bicyclists expressed a preference for partners, but were not prevented from their recreation when other bicyclists were not available. This suggests that trail bicyclists have experiences other than social bonding and may be motivated by other experiences such as nature appreciation.

5.3 PERCEPTIONS OF RECREATION CONFLICT

Perceptions of recreation conflict is the second major theme of this chapter. Trail users expressed a number of issues or subthemes based on the general theme of trail conflict. The remainder of this chapter identifies trail users' perceptions of conflict associated with trail bicycling and the possible reasons for these perceptions.

5.3.1 Hiker's View of Bicycling

Hikers have been identified as the trail users who are most likely to experience conflict with trail bicyclists. On the basis of existing information, the researcher expected to meet hikers that were experiencing conflicts and would have rich descriptions of their negative encounters. This was not the case for the majority of trail participants in the Rocky Mountains.

Day hikers and backpackers met on the trails were generally friendly toward other trail users including bicyclists. The CPS's selection of fire roads for bicyclists seems to meet the approval of hikers. "It doesn't bother me to see a bicycle on this trail. It's a fire road and this is the best place for bicycles. Because of the wide trail it's ideal for both hikers and cyclists. (Field notes: Family hikers, July,1991). Even committed hikers who have been visiting Banff and Yoho for years and have developed attachments to Banff said they have never had any problems with

bicycle users in Banff (Field notes: Michigan couple, July,1991). While on a bicycle, the researcher met mostly smiling faces, with greetings of "hello or hi" and comments such as "have a good bicycle ride" or "have fun on the ride down" (Field notes: Hiking Club, July,1991). Foreign visitors, such as a family from Britain who were hiking in the backcountry, were unaware of any potential for conflict and even became interested in learning more about trail bicycling (Field notes: English family, July,1991). The researcher did not experience any "conflict" encounters as a bicyclist or hiker nor did he meet people who have had direct experiences of trail conflicts in a national park.

The Michigan couple that returns to Banff for the scenery and "to get away" although tolerant of trail bicycling was somewhat confused by the attraction the trails they hike have for the activity of bicycling. It became apparent many hikers could not understand the attraction bicyclists had for Banff. A group of young hikers from a camp program could not see the appeal of bicycling: "They could not understand why someone would want to cycle on the trails that they were hiking on. For them these trails were very difficult" (Field notes: Camp hikers, July,1991). This same group of hikers likewise could not see the attraction of horse back riding on the same trails. In addition to the perception of physical difficulty in trail bicycling, hikers expressed the view that bicycling was not a nature appreciation activity. "I can't understand why you would want to cycle in the wilderness. You don't get the same experience of walking, stopping and investigating the fine details" (Field notes: Jack, July,1992). Hikers say they participate in hiking for reasons that are not obtainable by bicycling. Examples of this include: "If you're there to see the scenery you are going to go hiking, but most of the bikers I know are there for the speed" (Field notes: Camp hikers,July,1991) and,

> I enjoy hiking for getting away from the city. To enjoy the sounds and the slower pace. I want to see fewer people, quietness, see animals, to look at the details. I've gone on hikes where it took me forever to go a short distance, with book in hand I examined and identified plants, animals, tracks...- I see biking is like being in a car. You move too quickly to see the details (Field notes: Maggie, July, 1992).

Some hikers therefore view bicycling as an inappropriate activity for their own outdoor recreation. Trail bicycling is perceived as too physically demanding and is not conducive for a slower paced activity where the examination of natural details is a desired benefit. These people are satisfied with the benefits of hiking and cannot understand the attraction of trail bicycling for other people.

Other hikers agree with the media stereotypes where trail bicycling is focused on the speed and the out of control image. "I think some are out there to AHHHHHH (Tarzan call), like big time. They want to try going through anything possible" (Field notes: Camp hikers, July,1991). Since speed is perceived as a desired outcome, non-bicyclists believe the paved trails in Kananaskis are ideal for mountain bikers (Field notes: Camp hikers, July,1991) or bicycle trails should be paved and separated from hikers and horse users (Field notes: March 14,1990).

A number of hikers view bicycling as a physically threatening activity. A hiker's safety is in jeopardy because of the speed bicyclists can reach while on the trails. An organized hiking club has developed a system of yelling out "bicycle" when a club member comes in contact with any bicyclists. This word of warning prepares the rest of the group to expect bicycles on the trail.

> A loud "bicycle" was yelled by a person in the lead of the large group. As I approached the front of the group, I smiled, said "hello" and commented on the yell. "You said "bicycle" like it was a bomb raid. One woman replied "Yes, it was like a bomb warning, we don't want to get hurt. (Field notes: Hiking Club, July,1991).

The quiet nature of traveling by bicycle has also been identified as a problem for hikers. One hiker described the quiet approach by bicyclists as a "startle factor, where hikers are approached quickly, especially from behind, taking away from the relaxed care free feel of the trail" (Field notes: Maggie, July,1992).

The perceived "unsafe" image of trail bicycling may stem from the broader image that bicyclists have a different attitude than hikers which has been described as "inconsiderate" and "cocky".

> I don't like the "biker attitude" that most bikers have. They're inconsiderate. Trail users don't think about each other, riding more than two abreast, going all over the place. But cyclists seem to be the worst, riding too fast, aggressive, racing, not thinking about others, expecting others to move, don't give any notice that they are there, they are startling the hikers. I've been brushed by one bicyclist. ... I've had mostly poor interaction with bikers. I've see biker's having a certain attitude, being selfish - they don't think of others. Bicyclists are not out there to appreciate the park- they're there for a different reason (Field notes: Maggie, July 1992).

Some hikers believe bicyclists have a very aggressive attitude toward other trail users. "I don't want to have to move over for bicyclists, who seem to demand that the hiker move over or be hit (Field notes: Jack, July,1992). Because of this perception, hikers believe trails should be segregated;

> Bikes should have their own trails,...because hikers have to move to the side. That's a problem. It's always the hikers that have to move over for the bikes. The bikes just plow right through....It doesn't irritate me that much but, yea it always seems that we're the ones that are moving over (Field notes: Camp hikers,July,1991).

It does irritate another hiker, who goes one step further, where he believes bicyclists are very inconsiderate and aggressive. "I don't like the cocky attitude of bicyclists thinking they can get away with anything. Bikers will hit someone, then just continue on, no apologies, nothing (Field notes: Jack, July 1992).

In addition to the improper behaviour and attitude perceptions that hikers have of bicyclists, there are also perceived problems associated with time and safety towards women. The quick time and the ease it takes bicyclists to reach a destination is problematic for some hikers. A park warden, who himself bicycles on trails "feels uneasy when it has taken himself two days to

hike in somewhere and a cyclist pops up in a matter of four hours. (Field notes: Park Warden, July,1991). These hikers believe their experience is diminished by the access of a faster trail user. Although few people mentioned time was a factor for conflict , time (or the lack of it) was often given as a reason for participating in trail bicycling. Mountain bikes allowed people to see areas they would normally not have the time for.

Along with the perceived problem of time, the quick easy access into the backcountry was considered potentially threatening for women. Two women revealed a "startle" factor is a real concern for them, where one woman believed for female hikers and bicyclists the sound of male voices is unnerving when traveling alone (Field notes: Ottawa Couple, July,1991). Another woman expressed the same concern where she would not consider any backcountry travel by herself for "safety reasons, where protection from other people is a concern. I won't even go running at night by myself (Field notes: Susan, Aug.,1992). Only one woman, during this study was observed bicycling by her self. Solo female hikers were not observed at all during this study.

The suspicion of women towards men, for the reasons as mentioned, may explain the incident the researcher had with the only solo female bicyclist.

> one cyclist I past was a young woman, in her mid twenties, fixing a flat. She has since passed me on the scree slope. I asked her if she wanted to talk about biking. She was apprehensive. She asked if I was from the University of Calgary and who was I doing the study for?...I explained who I was and we talked for a very short time. I found out she was by herself and a local from Banff. I could tell she wasn't really in a hurry but at the same time she didn't want to talk. Her final comments were: " I'm not interested ... the conflict was obvious" and "I don't feel like it" in answering why she didn't want to talk (Field notes: Lycra woman, July,1991).

Although it will never be known for sure, this woman may have felt uncomfortable being in the backcountry by herself with people she didn't know. It is also possible she was simply having a "bad day" with the flat tire or she may have had bad experiences with trail conflicts (or researchers)

and didn't want to talk about it. All other people who were approached, during this study were very friendly and quite willing to talk about their experiences and give their opinions on trail conflicts.

Earlier in this section it was suggested that trail users contacted during this study have not had any conflicts with other trail users. This is not completely true since conflicts have been experienced. The conflicts were, however, not in a national park setting but on the trails in a urban setting. Conflict is associated with large numbers of people. "Conflict here can not be as bad as seen in the Gatineau Park, where the large number of users has caused the conflict (Field notes: Ottawa couple, July 1991). Conflicts have been cited by many bicyclists in the Capital City parks in Edmonton (Field notes: Redearth biker, July,1991), along the Bow River in Calgary (Field notes: Boston, July,1991) and in the town site of Banff. A young hiker said that for her mother, Banff was "hell" where "it's so small, the bikers just come right out in front of traffic" and "Bikers don't obey rules, they change their minds. Everyone is at fault, it seems. Same as pedestrians running across the road" (Field notes: Camp hikers, July,1991).

The problems in the cities is perceived to be the numbers of trail users. A young hiker dislikes the constant flow of bicyclists on the trails. "Its a pain when every five minutes there's a ring, ring, there's a biker and you have to move. You have to jump out of the way. (and) Sometimes they just expect you to move when you don't even see them" Another hiker agreed; "It's like walking and biking don't really mix (Field notes: Camp hikers, July,1991).

A few people perceive bicycling from the images they get from bicycle couriers. Couriers are noted for their erratic behaviour, riding the wrong way on streets and an anti-establishment image. A hiker explains his negative view of bicyclists from his experience with couriers and associates this image to trail bicyclists:

> I don't like bikers. Its the couriers I don't like. Riding all over the place; being pedestrians; then out onto the street, doing what ever they like. You don't know what they are going to do next. It' been the same in Banff. I was almost hit by a bicyclist bombing down the trail. It took away from the quiet experience (Field notes: Jack, July 28,1992).

In summary, the expectation to meet people in the field that have had experiences of trail conflicts did not materialize. The majority of hikers were friendly towards other trail users and were tolerant of other's behaviours. The few people who expressed that they have experienced conflict or believe that conflicts are common believe this is so not so much from direct national park experience but from perceptions as developed in urban settings and their expectations of trail bicycling and bicyclist's behaviours.

5.3.2 Information

> They couldn't get much information from Alberta Tourism about biking in the parks (national parks), but did find out there were good trails in Kananaskis Country (Field notes: Ottawa Couple, July,1991).

The lack of direct experience with trail bicyclists suggests hiker's perceptions of trail bicycling is based on other influences such as available information. Information about trail bicycling in the national parks was found to be varied in quality and content. Regulations and information concerning what trails are open are easily accessible from Visitor Services and information kiosks found within the parks. Bicycle rental companies provide information on a code of ethics on rental brochures, water bottles and t-shirts. However, this information is not posted on any of the walls within the shops. Suggestions for rides are also given by rental companies but this information is not always taken.

> The man in the store, who was helping the two teenagers, suggested Pipestone trail. "A bit of a grunt going up, but lots of fun coming down. It should take you about an hour and ten minutes. The boys looked eager but commented that they didn't want to climb any mountains (Field notes: July 16,1991).

The information available to park visitors is not always clear. The trail head to Alexandra Fire Road trail is not marked and the researcher passed the trail head four times before it was realized that this was the trail (Field notes, July 13, 1991). Park staff are also unclear on the regulations concerning trail bicycling. One bicyclist tells a story where he questions a warden that an area was closed to bicycles:

> Once the Warden asked me to turn around and come out when I was in there. (What did he say to you.) Well, it's funny, if I didn't ask him a damn thing, he wouldn't have said anything to me. When I asked him (if the trail was open) I kind of opened a can of worms. He said I don't know I'll call up, he used a short wave radio and found out it was closed. He made me turn around and come out. If I would have kept my trap shut nothing would have happened (Field notes: Boston, July,1991).

A similar incident occurred for a local rider, but instead of leaving a closed trail, the bicyclist was asked to leave a trail that was in fact open to bicycles.

> Probably the biggest comment is that Parks seems deliberately vague in describing what is open and what is closed. And I have had a big problem with that. I've been thrown off a trail (that was in fact open) by a warden. And when I discussed it... he didn't know. Several days later (it was his last summer) I showed him a map that was Park issue (and it) shows the open and closed trails.... His response was something along the lines:"Ah shit, they should just close all the trails. It's too much of a hassle to know what's open and closed. and they should be closed. ...
>
> That's the biggest comment I hear from customers. Lack of information. A very negative attitude at the information service. Most of them don't really understand the regulations particularly the townsite perimeter thing. ... (A friend's) fiance works at the Chamber of Commerce, in the information centre, and she was telling people that a good dozen trails that are (in fact) open, that (they) were closed (Field notes: July,1991).

The CPS is aware of the confusion over information as"comment cards are asking why certain areas are closed to bikes" (Field notes: Park staff, July,1991). Park employees have also been telling people that restrictions on bicycles are made for resource management reasons.

> He said as a warden he believed that the issue of mountain bikes is a resource management tool They (CPS) need to keep some areas 'wild' by preventing them from becoming day use areas. With day use (use by bicyclists) the area loses it's charm as wilderness and puts extreme pressures on wildlife, especially

> the fisheries populations and animals that need solitude, such as Grizzly bears (Field notes: Park warden, July,1991).

Other bicyclists have heard of possible trail closures for bicyclists due to new fishing pressures put on backcountry lakes.

> I spoke to a warden out there a couple of weeks ago, who said they are considering having to close it (the trail) because the fishing pressure is up so much. Because of the easy access by bikes, normally you have to make an overnight trip out of it because it was a several hour hike in, by bike its an hour to ride in (Field notes: Dave, July,1991).

The wardens that were met in the backcountry were very informative and helpful towards backcountry users. One warden, who was checking permits, was only too happy to answer questions on the minds of backpackers. He also rationally explained to the researcher why this particular area was closed to bicycles; being too wet and fragile for the demands of a bicycle (Field notes: July 22, 1991). The information he gave was reason enough not to ride in this area. But this information is not available to the average person who may be wondering why one area is open to bikes while another is closed.

Although not a problem for the mountain parks, information concerning open trails in Elk Island National Park has been problematic and deserves a mention in this study. All trails in Elk Island are closed to bicycles (CPS believes there are no suitable routes or there are good routes available outside the boundaries of this park) but some people are unaware of this and continue to ride the trails. On two separate occasions people have mentioned the good times, great trails, and few people they have seen while riding the trails in this park. They are shocked to hear that all trails in the park are closed and want to know why. They could not understand why the trails are closed since when they have used the trails the experience seemed appropriate and did not bother anyone else.

In addition to the lack of information about trail accessibility, a few trail users were interested in the impacts bicycles have for wildlife. In 1992, a man, who was trail bicycling, was killed and partially eaten by a grizzly bear. Many trail users, bicyclists and hikers alike, became interested with the bicycle/wildlife issue and wondered if this attack would become common place with more bicyclists in the backcountry. While many hikers see a potential for bear encounters, very few bicyclists have witnessed this problem. A seven year resident of Banff has encountered only two bears while riding his bike.

> I've encountered a few bears on a bike. Once was three years ago on the Healy Creek road and it was a very flat section. A grizzly was on the middle of the road and it heard us coming and was running before we saw it. And this spring ... we saw a grizzly that didn't want to move. He kind of had his territory staked out, we saw it probably 50 m away and it hardly gave us a passing glance. We just turned around and gave it some room. Then 20 minutes we came back up the trail to see if it moved off and it was still there. So we gave up (Field notes: Dave July,1991).

Bicyclists are given the same bear information as hikers, and consider they have the same risks as other trail users. The possibility of bear encounters, according to bicyclists, is no different from hiking the same trails.

Other wildlife seem to be less affected by a trail user's mode of transportation. However the researcher did notice that, while living in Jasper, elk would be more affected by a bicycle passing more so than a motor vehicle. While riding at night, elk would look up and attentively watch a bicyclist ride by. It was thought the elk could hear the humming of the knobby tires.(Field notes: Jasper, Sept., 1989) This observation was also made by a Banff resident who noticed the same thing and said "Elk and deer seem to spook way fast by a bike than by hikers or by cars" (Field notes: Dave, July,1991). He wasn't too sure why they reacted that way.

A consequence of the lack of information about trail bicycling appears to affect the perceptions of what is meant when a person goes trail bicycling. Hikers and bicyclists with limited

exposure to trail bicycling have a variety of perceptions of what is involved with this activity. Inexperienced bikers have often underestimated the difficulties of this activity. An example of this is a couple from Norway met on the Lake Minnewanka trail who were inquiring about the difficulty of the trail. They were still close to the trail head and had ridden the easiest part of the trail. She looked worried and tired and said she wasn't used to the bicycles, for they normally walk or hike the trails in Norway. She and her husband were wearing street clothes and day packs. They were having a difficult time with their first trail ride in Banff (Field notes: Norwegian Couple, July,1991). Other bicyclists have noticed the same occurrence on the same trail and "joked about seeing sleeping bags falling down hill sides and flat tires along the trail" (Field notes: Edmonton couple, July,1991). In her own words a bicyclist describes her surprise towards bicycling: "I thought biking would be easier of the two, between hiking and biking. Now I know, biking was more difficult because of the roots and the heavy backpack (Field notes: Susan, Aug., 1992).

Hikers appear to react differently and underestimate the capabilities of trail bicyclists. A bicyclist explains:

> I think they see a bike, they see the trail surface they are walking on and in some cases they are intimidated with by just walking. So they view a bike as just an unrealistic thing. They think it's entirely a risk, a risk sport (Field notes: Dave, July,1991).

Hikers expressed this view exactly as noted in the "hikers view of bicycling" section. Hikers also become envious of the speed that allows bicyclists to reach a destination much quicker than hikers. The researcher noticed this on a return trip from Mt. Assiniboine.

> I felt a bit of a negative reaction from the two couples as I passed them on the way up. They were busy talking with each other to return my greeting. But had a different reaction as I passed them again on the way down. They smiled at me, exchanged greetings and chatted for a bit. They wanted to know how much further it was to the Lodge. (they still had a few hours at the rate they were hiking) They looked very tired and seemed envious of my speed. They were also wet from sweat and the rain. As I left them, one women commented that " He's not even wet" A remark suggesting that it must be much easier to travel by bike; it's much faster and you don't get wet! (Field notes: Hiking couples, July,1991).

Other bicyclists have also had experiences with hikers wishing they had also used bikes. "A group of hikers left quite a bit before us. We passed them on the way out. The hikers were envious of us and commented that "we want bikes" (Field notes: Susan, Aug.,1992).

5.3.3 Bicyclist's Perceptions of Conflict

> [even after two trips to the mountains] I hadn't heard of the conflict problem before. I didn't find out until a friend told me of your thesis topic (Field notes: Susan, Aug.,1992).

This quote by a person who has just started trail bicycling and hiking may represent how people feel who are unfamiliar with outdoor recreation and the national Parks. However, most people who have spent time trail bicycling do understand that there is a potential for trail conflicts.

Trail bicyclists understand that conflicts do in fact occur and may be the result of their own presence and riding behaviours. While many bicyclists expressed they have heard of other people having problems, every bicyclist the researcher met said they have never experienced a trail conflict (in the backcountry) themselves because they are aware of the other trail users and act accordingly.

Bicyclists believe proper behaviour is to let hikers know that they are approaching, especially from behind. One couple said they talk to other trail users to let them know of their presence. "(H)ow can a hiker be negative towards you, if you say 'hello' and ask them hows it going?" (Field notes: Ottawa couple, July,1991). The use of bicycle bells has become a popular form to warn other trail users. Bells appear to have had mixed results since they can still be startling. "He did meet two hikers and used a bell to warn them of his presence. He said he didn't scare them too much" (Field notes: Redearth biker, July,1991).

A number of bicyclists believe they do not cause conflicts because they participate in the other trail activities. "They said they do everything; bicycle, hike, horseback ride. They believe since they do all the activities, they understand what is involved. They are careful on corners and with horses" (Field notes: Bicycling family, July,1991).

Some bicyclists believe the trail restrictions are unfair and are not really based on issues of trail conflicts but because of commercial interests and traditional biases.

> You know what's the big objection against bikes? The big thing against bikes, objection against bikes is that it takes too many people, too quickly into the backcountry. Thereby serving to dissipate the pristine character of that backcountry. That's the argument against bikes. But the horses, the horse pack trains are doing that far worse. If you ask me, and that ought to be brought to the fore. But there's all that private interest involved. I know that, you know and they're all making their bucks.... bikes are new, relative to their equine predecessors. They've got this bias towards them. There are no motors on these things (he laughs) They are powered by our legs (Field notes: Boston, July,1991).

Still other trail bicyclists see the problem as being an attitude problem. "If your attitude is to ride hard other people can pick this up. Even if you slow down and greet them as you meet, ripping away or doing tricks will give a bad impression" (Field notes: Mike, Sept., 1991). Bicyclists have come to understand that they need to leave a positive image with hikers and other trail users. Poor images of trail bicyclists are thought to close trails so riders are changing the perception of bicyclists to keep trail access open to them. A sport rider, who claims to ride on illegal trails, said he uses a bike bell and slows down for unsuspecting pedestrians. Another committed bicyclist describes the same belief, in his own words:

> The hiker issue has settled down a lot over the last few years. I think I have learned how to deal with it. Dealing with encountering hikers, slowing down much more than necessary. As a cyclist I know I can go by them faster than I do now. But its their perception of it that matters. I guess its taken a long time to learn that. I've seen people really over react to what they think is an unsafe speed (Field notes: Dave, July,1991).

Generally speaking, trail bicyclists see themselves as being considerate and understanding toward other trail users.

> Conflicts could exist with walkers who don't move over for cyclists and cyclists moving too fast. People not being courteous or considerate of other people. Personally I wouldn't cause conflict. I'm considerate of other people. Possibly by accident a conflict might occur (Field notes: Susan, Aug. 1992).

Other bicyclists see the potential for conflicts but for some reason, and they aren't sure why, haven't themselves experienced a trail conflict.

> I couldn't tell you one person that has had a near miss and I see a lot of people in the backcountry using both mediums, and is an issue I talk to people about. So its surprising that I haven't heard of any that I can think of. I believe that they exist (Field notes: Outdoor Educator, Sept. 1992).

A Banff resident also believes that the conflict problem is symmetrical, where the exclusion of trail bicycling from hiker's complaints has caused bicyclists to resent hikers and the CPS. The problem as this resident sees it, is compounded because only a few locals, the committed bicyclists who do quite a bit of riding, notice the closures to the trails and develop this resentment. Tourists "are usually very happy with the trails and they aren't here long enough to see a problem with access" (Field notes: Dave, July,1991).

Bicyclists understand, as already mentioned, that there is a need for each rider to ride responsibly to keep the trails open. Bicyclists thought traveling slowly around corners to prevent sudden interaction with other trail users was one of their biggest concerns. "Definitely people have to go very slowly especially around hairpin turns and switch backs (Field notes: Boston, July,1991). The outdoor education class was also taught to sustain a safe speed for their own safety

> we cautioned riders to really slow down if they couldn't see clearly, you know, ahead of them. To generally ride in control because they had their gear on their bikes, so I didn't hear of any incidents or see any examples of people riding out of control. It's a fairly wide trail too (Field notes: Outdoor Educator, Sept. 1992).

Responsible riding for some trail bicyclists means to ride only trails that are open to them. A returning bicyclist noticed how other bicyclists were following the rules; "they ditched their bikes, cached their bikes in the woods someplace. They were going to follow the rules to the letter. They were not going to violate anything (Field notes: Boston, July,1991), and believe this to be appropriate, however he has also claimed to have ridden trails that are closed to bicycles.

> Once I snuck up there and I was really all paranoid, and I hid my bike too soon. I could have enjoyed even more of it. I would have taken it up on the high switch backs up by the lake (Field notes: Boston, July,1991).

Boston, believes that he was right to ride on a closed trail because the rules are being made unjustly and should not apply to some of the closed trails. As long as he does not interfere with other trail users, he believes, his illegal actions are not really hurting anyone. This is a rational decision made by an adult man who has a strong attachment to Banff.

5.3.4 Bicyclists in Conflict with Bicyclists

The attitude that a bicyclist can go where he or she pleases as long the person rides responsibly is met with concern by other bicyclists who also enjoy hiking;

> they both agreed it was good that trails are limited to cyclists because of near misses they have experienced with bicyclists who were bouncing off rocks and out of control. They especially disliked cyclists who were on closed trails, where they have been hiking, because they were really unsuspecting to meet with reckless riders (Field notes: Ontario couple, July,1991).

Bicyclists understand the poor image they are given by the few who ride on illegal trails and irresponsibly. The best description of a bicyclist's perception of the poor attitude comes from a

bicyclist who resides in Banff. Although, he considers himself a sport rider, he is still appalled by the antics of a few riders.

> There is a lot of people in this town (Banff) especially who want to fulfil that image as cyclists They are trying to be something different, they're trying to push the image for themselves. Thinking that the only way to go fast is to push it as hard as you can . Which isn't really true. ...Once in a while you see people spook an elk and chase it. And a couple of weeks ago I saw some guys pissing off a cliff from a trail over the Bow River. Having a great old time doing it. They thought it was a great time. I thought it was ignorant. I think they enhance the spooking of hikers by coming up really quiet. I've seen a lot of really bad things happen by certain bikers. It's a small minority but it's noticeable. ... To stereotype them ... like skiers. They fancy themselves as extreme skiers. They are in their late teens, 18, 20, 22. There are no more that 20 people like this. A lot of them don't work.. I can't speculate how they get money. All they have to do is ride their bikes. I don't think they appreciate what they do. It's just a big playground for them. The trails is all that matter, they rarely look up and see where they are (Field notes: Dave, July, 1991).

With the knowledge that there are a few irresponsible bicyclists on the trails, residents and park supporters understand the need to collectively voice their opinions. The problem that is encountered is that there are no formal organizations in place to represent trail bicyclists. Hikers and equestrian groups are supported by established special interest groups who have maintained their privileges in the park settings. Being the newest activity, trail bicyclists are poorly organized and are unrepresented by a formal organization. A Banff resident believes the reason for the lack of organization is the type of person attracted to help with the cause.

> There's a group being established in Lake Louise, a group trying to get some the trails open, but I think they are kind of too militant to get anything done. They sit around and get angry with each other at their meetings. They won't accomplish much unless they settle down a bit. That's the impression I get from speaking with a few of them (Field notes: Dave, July,1991).

This Banff resident is also keeping a low profile since, those who are organizing are part of the problem (Field notes: Dave, July, 1991). He also does not want to be associated with a group that represents all trail bicyclists. "That's why I wouldn't get my voice behind them because there are

too many really negative cyclists. I see blatant disregard for the surface of the trail" (Field notes: Dave, July,1991).

Bicyclist's understand the need to form advocacy groups but also know the formative opponent they are up against.

> Horse users have a very powerful voice because they are a commercial business. There isn't for mountain bikes. There is nobody who can claim a need for subsistence, for food, for their business to keep functioning. Brewster says their business depends upon these trails (Field notes: Dave, July, 1991).

Trail bicyclists are frustrated with their predicament. They want to be able to organize and give input into trail accessibility but are prevented by the association with the negative images of trail bicycling. Problems also arise with continuity of membership because of the transient nature of park residents.

5.3.5 Perceptions of the Canadian Parks Service.

This last section is concerned with the perceptions that trail users have on the position taken by the Canadian Parks Service. The majority of trail users are basically satisfied with the management of the trails in Banff and Jasper National Parks. However, a common theme of trail bicyclists as represented by the words of one couple, "would prefer more trails open to them and would like to know why some trails are closed" (Field notes: Ottawa Couple, July,1991).

Requests were made for more trails to be open to bicyclists which would allow for more scenic variety (Field notes: Bicycling family, July,1991) and for the CPS to develop trails equal, in quality, to Kananaskis Country (Field notes: Boston, July 1991).

The desire for better and more trails, caused one bicyclist to write the CPS expressing his concerns and questioning the CPS's decision making. He explains in his own words what happened:

> So I wrote a letter to the Superintendent of Banff park. Talking about the horse damage.that's far worse than the bicycles. and I think they should open some the these trails back up for bikes. I got a 'standard reply' with brochures locating horse and hiking trails (Field notes: Boston, July,1991).

By standard, he meant they avoided his questions and comments and sent him information he already had. This bicyclist will continue to visit Banff because of attachments he has for the area, but is still angered with how he has been treated.

CPS employees are also confused about the reasons for managing trail bicycling. One warden said he could not understand why Parks tries to control bikes through the conflict issues, but should be thinking more along the lines of resource management and keeping wilderness protected from day use (Field notes: Park Warden, July,1991). A Banff local agrees with this logic, and would adhere to such a policy, but is irritated with the perception that bicyclists are being treated unfairly.

> I've heard parks side of it: They don't want to make access overly easy. Cascade fire road is a good example. ... They (parks) claim because of the Grizzly bear population they don't want to make it too easy for people to go in. But there is commercial horse traffic out there. That, I disagree with. That's probably the biggest irony: the commercial horse traffic is extremely destructive to trails (Field notes: Dave, July,1991).

In addition to the perception that bicyclists are being treated unfairly by the CPS, bicyclists believe they are not getting enough information about trail policies and are not allowed to participate in policy development. A Banff bicyclist describes the perceived secrecy of the CPS:

> Elk Summit used to be open and they kind of snuck the closure in, it seemed with the construction of Norquay. That was their excuse at the moment. Because of the construction at Norquay, simply, they closed it and they haven't reopened it. It was a very well established trail, so there couldn't have been any real

> environmental impact. ... But the point is that they close that kind of trail sneakily. There is no public discussion of it, it was just suddenly closed. (Were closures explained?) No, they didn't seem to, they just didn't talk about it (Field notes: Dave, July, 1991).

Bicyclists say they understand the Parks position, but they do not understand why Parks is being unclear in their policy and not open to discussion.

> I can understand the need to have some restriction, but I wish they would make it clear exactly why, and I wish it was open to some discussion. There are a lot of trails in the Park that get very, very little use and I think if you opened them to cyclists there would be just a modest increase in use.- There should be a lot more discussion. They should be more open in establishing policy (Field notes: Dave, July,1991).

Hikers on the other hand are basically satisfied with the CPS's current trail bicycle policies. Trail bicycling is limited to mostly fire roads, and trails that are, to a certain extent, less appealing to hikers. The trails that are open to cyclists are the least likely to have conflict problems because they are wide, relatively straight, and currently have few hikers. However, not all hikers are satisfied. The problem is not with the designation of trails but with the aggressive attitude of bicyclists. One hiker believes: "if bikers continue to have poor attitudes I would like to see bikes banned from national park trails. I would also like to see a segregation of the trail users. I know it has limitations but they should be kept separate" (Field notes: Maggie, July, 1992).

In summary the majority of trail users are satisfied with the way the CPS is managing for conflict. However, an increasing number of bicyclists are confused with current management practices and question the necessity for restricting trail access. It was also found that some trail bicyclists are experiencing conflict with the CPS because of the perceived interference the restrictions have for trail bicycling opportunities. A number of trail users expressed that they would like more input into developing policy and explanations for decisions that are being made.

5.4 SUMMARY.

People participate in trail bicycling for a number of reasons. Trail bicyclists participate for experiences of nature appreciation, fun and excitement, challenge, and for physical exercise. Some hikers and bicyclists perceive bicycling on national park trails as inappropriate since, according to them, the activity is a sport and does not allow for a national park experience. It is these opposing views, rather than the few actual physical mishaps, that contribute to the issues of trail conflict. The majority of people who dislike trail bicycling in the national parks attribute this to bicyclist's negative personalities and aggressive behaviours. These perceptions were often developed from personal experiences in an urban setting.

The majority of trail users are satisfied with the current policies of the CPS. However, many bicyclists would prefer to know how decisions are made and be allowed to be involved in the decision making. They would also like to be given clear information as to what trails are available to trail bicycling. Although, the the Canadian Parks Service states that trail bicycling is an appropriate national park activity, some hikers and bicyclists continue to be uninformed of the park appropriate experiences associated with trail bicycling. It is uninformed people who are experiencing clashes with trail bicyclists and report "conflict" with this activity.and it's participants.

CHAPTER SIX

ANALYSIS AND DISCUSSION: MANAGEMENT IMPLICATIONS OF TRAIL BICYCLING AND CONFLICT

6.0 INTRODUCTION

The purpose of this research, as previously stated, was to examine trail bicycling and the conflicts associated with this type of recreation activity. This chapter will discuss how the findings of lived experience support or modify theories about recreation conflict and the implications these findings will have for park and recreation managers. Although the purpose of this study was not a policy review/recommendation exercise, the findings do provide the basis for suggesting a range of approaches to managing conflict.

6.1 RESPONDING TO THE DATA

The current management of trail bicycling in Banff and Jasper National Parks has specifically identified "conflict" as a factor that has to be addressed in the management of trail bicycling within national parks. The criteria to designate a route for trail bicycling includes: "where potential conflict between user groups and/or wildlife is not considered to be beyond acceptable limits" and the criteria to close a designated route to trail bicycling includes: "where undesirable levels of conflict between trail bicyclists and other trail users develop, or upon which high speed cycling takes place" (Davis, 1989:4). The CPS, through a park study and monitoring programs, believes that the conflicts among hikers and horseback riders and trail bicyclists "are stronger than anticipated" (Hamilton, 1990:2). This in turn has led to changes in the Backcountry Management Plan for the Four Mountain Parks. The "changes" are a reduction in the numbers of trails available to trail bicyclists "primarily due to contacts with other backcountry users. (Parks) (s)taff of the BNP believe (that) the vast majority of users of (the) backcountry, and high use front-country, will

support this more restrictive approach" (Hamilton, 1990:6). This official wisdom is not supported by the majority of people who were contacted during this study.

6.2 UNDERSTANDING THERE ARE DIFFERENT PERCEPTIONS

The extent of trail conflict on backcountry trails in Banff and Jasper National Park is minimal. According to the trail users contacted during this study, very few people said they have experienced conflict while using national park trails. Observations of trail users also suggest that the majority of hikers and trail bicyclists can, and do, get along. Even though recreation conflicts appear to be a problem for a limited number of people this does not mean that conflicts are less of a problem and not worthy of limited investigation and management attention. The conflict that exists can depreciate the quality of a natural park experience. People experience trail conflicts for a number of different reasons. This section will discuss the underlying reasons why some people stated that they are experiencing conflict. The reasons that are given are grounded in lived experiences and are supported by the theories of Jacob and Schreyer (1980).

According to Jacob and Schreyer (1980) recreation conflict occurs with social contact (knowledge of another's behaviour) and goal interference attributed to another person or group (see section 2.4). Interference is a subjective notion and is developed from an individual's interpretation and evaluation of past and future social contacts. A trail user must therefore understand that a goal (possibly an experience for participation such as nature appreciation) has been interfered with and the interference is attributed to another's behaviour. To specifically attribute trail bicyclists as the person or group that caused the goal interference, a trail bicyclist will have to come in contact with the person being affected. However, Jacob and Schreyer also point out that a person's perception of contacts may also be based not on direct experience but obtained from other sources such as newspapers or word of mouth. The theoretical perspectives

and the four dynamics of conflict, developed by Jacob and Schreyer (1980), will be used to organize and support the notions of conflict as found in the lived experience.

6.2.1 Activity Style

This research has found that national park trail users, both bicyclists and hikers, have different perceptions of the activity of trail bicycling and of the people who participate in this activity. Perceptions of conflict are developed with the meaning that is given to trail bicycling and the behaviours that are associated with participation. Hikers attribute a number of different meanings and subsequent behaviours to trail bicycling. Trail users who have had little or no direct interaction with trail bicyclists, but have specific notions of the meaning and behaviours that are appropriate for using national park trails often assign negative meanings to trail bicycling. Traveling at a slow pace to investigate the details and a "natural" experience are behaviours that some hikers cited as appropriate for experiences on a trail. For these hikers conflict occurs with the sudden but quiet appearance of a bicyclist who is perceived to be traveling "too fast" and "out of control". Trail users who expressed the possibility of conflict perceive that trail bicyclists are not in the parks for a park experience, but rather believe that bicyclists are in the parks for other reasons such as for sport, challenge, and for reasons that people ride bicycles on pavement and in urban settings. The goals of trail bicyclists are perceived to be different from hikers and therefore there exists the potential for recreation conflict.

The commitment of hikers is also challenged by the presence of trail bicyclists. The status a hiker may achieve for accomplishing a multi-day hike was said to be diminished by the presence of a bicyclist who took a few hours to accomplish the same task. Lessening the time commitment to reach certain destinations will allow more people (who previously had time barriers) to achieve this goal. Conflict may be experienced by those people who have in the past identified

themselves with a unique physical achievement (hiking to a remote location) that has become common place with the use of a mountain bike.

Conflict research suggests that "the amount and type of previous experience a person has had may affect his/her perception of the activity and the behavior of others" (Schreyer,1990:19). A very common theme expressed by trail users, both hikers and bicyclists, was the experience of trail conflicts in an urban setting. Perceptions of arrogance, unpredictability and, being inconsiderate are used to label urban trail and road bicyclists. One hiker used the term "courier" to express the negative behaviours of bicyclists. Bicycle couriers are well known for breaking laws and their rebellious, on the fringe, image. The perceptions of the urban bicyclist has been transferred to the park trails and is being used to identify the trail bicyclist. While some bicyclists do ride recklessly, all trail bicyclists are being labeled as incompatible national park users, and are being restricted for conflict reasons. Labeling or stereotyping is a result of emotionalism, false concepts and biases (Nicholes, 1980). Nicholes (1980) believes the problems associated with stereotyping, such as conflict, is a result of communication breakdowns among users and between users and nonusers. He also believes that these conflict situations can be managed with proper information and understanding of the experiences and activities involved.

The reason why conflict between most hikers and bicyclists has not materialized to the extent expected may be explained by the fact that many bicyclists continue to participate in hiking and other trail activities. There appears to be a transferability of the experiences of these activities that allows a participant to interchange them at will. This suggests that hiking and bicycling, and possibly horseback riding, may have a similar activity style for many people. The comm: meaning for these activities may be to enjoy the natural surroundings and to obtain social benefits. Many bicyclists believe they are not the cause of conflict because they understand the expected experiences of other trail users. The bicyclists understand other's expectations and therefore behave appropriately when they meet other trail users. Conflict is reduced by understanding the

meaning of each of the trail activities and the behaviour expectations that go along with those meanings. People who participate in the different trail activities are not surprised by the speed and abilities of bicyclists and therefore do not necessarily see these behaviours as threatening and a potential for conflict.

The implications of this data suggests that managers need to understand the dynamics of activity style which explains the variation that occurs both between different activities and within the same activity. Managers and park staff, as well as trail users, will need to be informed of the potential for different activity styles in order that expectations can be developed to lessen the chances of recreation conflict.

6.2.2 Resource Specificity

Both hikers and bicyclists appear to have emotional attachments to the national parks. Functional attachments may be a cause for conflicts between these two trail groups. Hikers in this study expressed the belief that bicyclists could go else where for their recreation, such as Kananaskis Country and on paved trails and roadways. Moreover, hiker's appear to be threatened by bicyclists and want to safeguard their natural experiences from the bicyclists who appear to them to be there for some other reason. In addition, hikers perceive they have a functional attachment to national parks but do not understand the association of trail bicycling to the same parks. The alternative locations, as suggested by non-trail bicyclists, suggests they do not understand the park-appropriate opportunities that are available to bicyclists. Trail bicyclists have also said that they have emotional attachments to Banff and the other mountain national parks and that this attachment is given as a reason for returning to these parks. This same attachment may also explain why bicyclists are upset with trail closures for their activity. Perceptions of conflict towards the CPS are developed by bicyclists who have attachments to the parks but are not given the opportunities to experience the parks through their choice of using bicycles.

The implications for managers is that natural settings can no longer be thought of as a collection of resource attributes, but managers must consider the bonds that people develop toward these places. People are very attached to Banff and Jasper National parks and want to be able to participate in activities, of their own choice, in a place they consider "home." Schreyer (1990:25) explains that the rationale: "Well, we won't let them do that activity here, but they can just as easily do it over there, is a classic example of missing this point." Managers need to understand place attachments (both functional and emotional) that people develop, to understand the reactions of people, when decisions are being made to restrict the availability of their activities.

6.2.3 Mode of Experience

The interaction of trail users, experiencing various levels of attention to their surroundings (ranging from focused to unfocused modes), increases the potential for recreation conflicts. Some hikers indicated that a purpose of their activity was to investigate the fine details of nature, where the pace is slow, unhurried, and at the whim of interesting features. Hikers perceive bicyclists as interruptive, startling them from their "natural" world, and causing the hikers to move quickly off the trail. Conflict may be experienced with continued interruptions and the perception that the intimate interaction with nature can no longer be achieved when a hiker must "check over his/her shoulder" to prevent from being startled or hit by a bicyclist.

Many trail bicyclists, who have started out as hikers and continue to hike, also enjoy the finer details of nature. Contrary to some hiker's perceptions bicyclists do stop and enjoy their surroundings. But not unlike a nordic skier, a trail bicyclist also enjoys the "space", the movement through places that gives a broader picture of an area. Many bicyclists said they understand their potential to startle slower moving trail users and therefore talk or use bells to warn others of their

presence. Hiker's perceptions that trail bicycling is more like motorized recreational activities or like "thrill" activities such as alpine skiing, will give them reason enough to think that bicycling and hiking are incompatible trail activities and therefore will lead to conflict.

Trail bicycling is also very unique as a outdoor recreation activity, in that besides having benefits in and of it self, it can also be used as a means to access other outdoor activities. Trail bicycling was said to provide the opportunity to participate in other activities such as hiking, fishing, rock climbing, and camping. These activities are considered appropriate in national parks and therefore, through association, trail bicycling could be considered appropriate as a means to these other experiences.

Resource managers understand that some activities are incompatible. For example, sport bicycling and plant identification activities should not coexist on the same trail for safety reasons. Incompatibility is the reason given for not allowing bicycles on interpretive trails. This gives rational for managing through trail segregation, zoning and a system "that can consciously develop a range of settings managed for a variety of recreation experiences" (Schreyer, 1990:26). The point that should be made is that the mode of experience of trail bicycling varies and may or may not be compatible with national park mandates. Bicycles can be used as a means for the opportunity for other "traditional" park activities and in it self can be a park appropriate activity. Trail bicycling, however, may also be an inappropriate park activity where speed and aggressive riding is the goal. These differences in activity styles and experience benefits need to be identified, separated, and made known so managers can make proper decisions when planning for the opportunities available in national parks.

6.2.4 Tolerance for Lifestyle Diversity

Conflict exists because of the many diverse groups using public trails. The problem becomes apparent when "one group perceives another's values, behaviors, or even presence as inappropriate" (Schreyer, 1990:19). Although this is not a predominant observation, hikers have expressed an association of trail bicyclists with bicycle couriers and given broad stereotypes to bicyclists as arrogant and inconsiderate. The media has also helped to perpetuate images of bicyclists as part of the counter culture with values and behaviours that may be inappropriate for main stream society. Although the degree of media influence is not measurable in the study, it is believed that the media possibly "primes" hikers to expect certain images (stereotypes) of bicyclists as one aspect of the total image the hiker receives. Personal observations and conversations with trail bicyclists suggest this perception is unfounded in this context. While the counter culture image may flourish in the American context and with a few youth in the cities, the majority of backcountry trail users are closer to main stream images as portrayed in current advertising. Backcountry trail bicyclists were often families or couples and were most likely in the twenty to forty year old age group. Their image would be considered conservative and they themselves expressed their behaviour as responsible and park appreciative. Conflicts associated with lifestyle diversity are more likely to occur in and near townsites where social images of "mountain bikers" are more pronounced and sport riders are more likely to ride. The management implication is that conflict will occur when a person perceives other trail users as "different" from him/herself. In the Canadian national parks context, managers need to understand that lifestyle differences will occur and play a part in conflict situations. The greatest potential for conflict resulting from lifestyle intolerance will not be in the backcountry but in the more populated townsites and easy access trails. Communication is essential to reduce this type of conflict.

> A potential management strategy for encouraging conflicting user groups to work out their differences is to create a greater awareness of the mutuality of interests they share. ... Breaking down barriers of perception can be an important first step

in developing communication among conflicting user groups (Schreyer, 1990:26-27).

6.2.5 Social Interaction Process

Owen's (1985) environmental behaviour perspective would consider conflict issues in a slightly different light. Conflict is considered to be a cumulative process, where the person experiencing conflict is attempting to eliminate environmental instability and restoring perceived equilibrium. Equilibrium on national park trails would be the status quo; no new activities or trail developments, simply the continuation of traditional hikers and horse users on the existing trails. Technological changes to the bicycle have developed a hybrid activity and have subsequently challenged the status quo. Trail bicyclists can achieve the benefits of traditional park activities (or open the opportunity for them) and provide the opportunities for experiences, such as excitement and physical exercise, that are not available to the other traditional trail activities. Traditional hikers may feel threatened and experience conflict because of the changes to the equilibrium and status quo that has long been established in the national parks. Trail bicycling may take away their status as being committed outdoors people since the same time commitment is no longer required to visit remote areas. Bicyclists are also seen, as described by Patrick (1989) as "yuppies", resource consumers and "new age hippies"; stereotypes that do not sit well with committed hikers who have developed an image of traditionalists.

Resistance to change appears to be a common theme with outdoor recreationalists. Resentment and conflict is quite common between outdoor people who have been subject to changes in technology and methods of conducting an activity (Devall and Harry,1981). An example of this is nordic skiers who have been divided with changes to the materials used to make skis (from all wood to synthetic) and with technique changes (from the diagonal stride to skating). Many people are not interested in these new innovations and will continue to use traditional equipment and techniques. The same in true for other activities such as: rock climbing (use of

indoor walls and techniques of repelling first.), and for sports such as: ski jumping (where there have been changes to the flight position). Backpackers have also seen changes in camping techniques that are not always easily accepted by all participants. More environmentally sensitive methods such as low impact camping skills (using small stoves instead of fire rings, and not trenching around the tent site) and expedition trip changes from large porter supported expeditions to self sufficient alpine style trips are examples of changes that are not accepted or put into practice by all backcountry campers.

Trail bicycling is a unique activity. It appears to be a hybrid of the opposing activities of hiking and mechanical activities. Like a hiker, the bicyclist has expressed experiences of nature appreciation and social interaction. The bicyclist also holds claim to more excitement oriented facets which would be claimed by motorized recreation participants. However there is a difference; mountain bikes are not motorized and a part of their appeal is that they are self-propelled, nonpolluting, easy on the body and healthy for the participant (Gadd, 1987). In this study, trail bicycling was often compared to nordic skiing where the activity, in a national park setting, can be enjoyed for more than one mode of experience. Trail bicycling is also unique in that it can also be used as a form of transportation to get to a destination to participate in other forms of outdoor recreation.

Initially, the research found that the direction of conflict was asymmetrical where hikers expressed conflict towards trail bicyclists. This feeling was not reciprocal. However, with further probing, some bicyclists express conflict towards the traditional park users because they are perceived to be preventing the opportunity for bicycling in the parks. Bicyclists have also expressed conflict towards the CPS for the same reason, where they believe bicyclists are not given an equal opportunity to experience the park settings. This symmetrical conflict relationship is created not from two opposing activities, where each activity inherently obstructs the goal attainment of the other, but is derived from poor communication and confusion about the

meaning given to trail bicycling. Perceptions of conflict for hikers are developed from stereotypes and images of the inappropriateness of trail bicyclists, while conflict as perceived by bicyclists is created as a consequence of traditional park users and managers interfering with park experiences for trail bicyclists. In both cases, the behaviour which is attributed to goal interference is not innate but can be managed for a peaceful coexistence without changing the integrity of the trail experiences. This issue will be addressed in the following section.

One way to visualize the potential for trail conflicts is to place trail users on a multidimensional spectrum according to their experiential goals. The dimensions may include experiences such as nature appreciation, physical exercise, and social factors. The placement of an individual on a trail experience spectrum would be dynamic since a person's motivation for trail experiences may change over time and/or may be dependent on a setting's attributes. A model such as this may place nature appreciation and sport motives on opposite ends of the spectrum where the dimension is measuring varying modes of experience. Other motives and benefits may also be incorporated into this model, see Schreyer and Driver (1989). The potential for conflict would exist and increase as the distance (which represents being dissimilar) between two people, as placed on the spectrum, increases. People with strong differences, being on opposite ends of the spectrum, have the greatest potential for conflict. Alternatively, people with similar activity styles or mode of experience would likely experience less conflict. Managers need to recognize, that the greatest potential for conflict is not with people who share common views and pleasures but with trail users who have definitive goals at opposite ends of an experience spectrum. Despite the fact that there are situations when there is no conflict between hikers and bicyclists, with differing styles of participation in either hiking or bicycling, conflict is likely to be a continuing phenomenon.

6.3 MANAGING FOR RECREATION CONFLICT

> Each national park will offer a variety of outdoor recreation opportunities for visitor of diverse interests, ages, physical capabilities and skills so that they can understand and experience the park's natural environment consistent with protecting the park's ecological integrity (CPS, 1991:36).

This proposed policy identifies that outdoor recreation is one of the functions of national parks and where the goal of outdoor recreation managers is to provide the opportunity for a quality experience. Conflict undermines the potential for a quality experience and therefore must be managed.

> Understanding conflict becomes very important in the effort to provide quality recreation experiences. Outdoor recreation in natural settings primarily involves the use of public lands ostensibly open to everyone. An inevitable consequence is the interaction of persons from varying backgrounds who bring with them differing recreational agendas, and who may not particularly get along with one another (Schreyer,1990:13).

The CPS acknowledges the potential for user conflicts and manages to reduce conflict by indentifying appropriate activities. Appropriate activities have been determined by using the VAMP and zoning systems, and through a park management plan. Marketing techniques are also used by the CPS to encourage appropriate activities and reduce visitation in overused areas therefore reducing potential conflicts (CPS, 1991). Through these processes trail bicycling was determined as an appropriate national park activity, in certain zones, as long as this activity did not cause conflicts for other activities. However, treating recreation participation in terms of an activity creates problems associated with stereotyping and narrow definitions. Schreyer (1990:23) explains:

> Any given activity may be participated in by a variety of people from varying backgrounds with differing needs, relationships to the resource and relationships to other users. As a result, people within the same activity may vary considerably in the ways in which they choose to behave, and in the process, may foster negative responses from other participants.

In addition to using an activity definition of recreation, a heavy handed approach of managing conflict has been used where trail users are segregated by physically separating them. Trail bicycling routes have been designated (and closed) according to the potential for conflict between user groups that are considered as "beyond acceptable limits" (Davis, 1990). This becomes a very subjective decision when determining what is an acceptable limit, whose limit is used, and what is considered as conflict. The perceptions of trail users as evident in this study reveals that definitions of acceptability and conflicts vary according to individual experiences. Current trail users are basing conflict decisions, not on the basis of personal experience on backcountry trails but rather on the basis of perceptions of stereotypes as created by the media, urban trail experiences and by second hand information of other people's experiences. In addition, the situation is aggravated by the fact the information on the appropriateness and the acceptable behaviour(s) of trail bicycling is not clearly presented to trail users of the national parks.

The current management approach to reduce potential conflict, using land use planning strategies such as zoning, does meet CPS's objectives. Separating activities with different modes of travel (hiking and trail bicycling) will reduce the physical interference and disruption of bicycling, the offending activity. However, this approach appears to exaggerate the issues of conflict and further reinforces the stereotype that there is a difference in values and behaviours of trail bicyclists (as compared to hikers) that will violate norms of appropriate behaviour on park trails. Restricting bicyclists, without informing all trail users of the underlying reasons, likely contributes to notions of "unlikeness", which in turn increases perceptions of conflict between bicyclists and hikers. Managing conflict using zoning, trail head signs and brochures that list openly available trails may eliminate or reduce physical goal interferences, but will not address the psychological conflict that will persist when values about appropriate definitions and uses of recreational setting clash (Roggenbuck, 1992).

The currently used strategy could be considered an applied behaviour analysis strategy which focuses on overt behaviour and uses a quick approach to directly address the problem. Although this strategy is efficient it does not produce long term behaviour changes. The applied behaviour analysis approach is a "quick fix" approach that requires continual application to be effective. This approach does not deal with explanations of a problem therefore is better suited to solve specific behaviour problems than to teaching an attitude or ethic (Roggenbuck, 1992). The remaining sections of this chapter will focus on management strategies that will reduce the psychological conflicts that continue to plague national park trail users.

6.4 PROVIDING INFORMATION

> 4.2.1 Information will be made available to all Canadians as well as tc park visitors, to encourage and assist them in understanding, enjoying and protecting their national parks (CPS, 1991:36).

Stating that trail bicycling is an appropriate national park activity requires the CPS to make this information available to the general park user. Current information dispersed through a trail bicycling brochure and posting trail heads with open or closed signs does not appear to be sufficient to inform the public of the CPS policy and the appropriateness of trail bicycling in the parks. As mentioned earlier, this is an applied behaviour analysis approach which works well for specific behaviours and only for the short term. Park users who are not bicyclists and who are not given information on trail bicycling can not be expected to understand the nature of this specific activity or the related park experiences.

Interviews revealed that Banff residents would also like to be informed and given the rationale behind trail closures. Residents watch the quick solutions being implemented to control trail conflicts but are not informed why such measures have been taken. Freedom of recreation choice appears to be taken away when the CPS is perceived to directly manipulate trail users without explanation. Some trail users have even expressed feelings of conflict towards the CPS

for this management strategy. The CPS needs to play a more proactive role in educating and persuading park users of the appropriate activities, experiences. and behaviours for a national park setting. Undesirable park visitor behaviour and visitor conflicts can be managed by changing their belief system using a persuasion intervention such as the central route to persuasion (Roggenbuck, 1992).

Changing belief systems using persuasive strategies such as education and information dispersal, must also be applied within the CPS. Recreation managers themselves must be aware that conflict is not simply two groups not getting along but is a result of differing participation requirements based on each activity and the personal experiences and expectations of each participant (Schreyer, 1990). Park staff have to believe in the appropriateness of trail bicycling to be able to convey this message to the public. Park staff and park visitors alike need to be informed of the issues so they themselves can make their own decisions.

> According to this approach, the recipient of the message carefully considers the reasons for recommended actions, eventually accepts the advocated action as making good sense, and acts accordingly. ... The learned behavior can be expected to recur in the future because the beliefs and attitudes that support the behavior have been internalized. There is no need for continual promise of reward or punishment as in the applied behavioral analysis approach (Roggenbuck, 1992:172).

The lack of information and methods of conveying the message to the public appears to be a common problem when managing for trail bicycling.

> The most critical part of recreation management is to convey the information about mountain bike opportunities to the public. Mountain bikers, of course, need to know where they can go to meet their expectations, and the public at large needs to be able to tap this information so that they will be aware of whey they might expect to find mountain bikes on the road or trail. Conveying information seem to be the most difficult recreation management job to do well. Somebody always seems to miss getting the word and ends up in the wrong place causing conflict and upset (Spray, 1986:241).

The overall implications of this research's data suggests that the CPS needs to better inform park visitors and park staff of the experiences and benefits of trail bicycling. Since trail

bicycling can have other non-appropriate park experiences, such as those associated with speed, the CPS needs to provide information on the experiences that are available to park visitors and which ones that are prohibited.

Park staff need to be concerned with users' expectations. If hikers do not expect bicyclists on the trail, or do not know what to expect when meeting a bicyclist on the trail, conflict may result. Current expectations suggest that, while the majority of people using the trails accept multi-use trails some people are not aware to what to expect. Information is needed to inform trail users so they are not surprised by who and what they will encounter on the trails. However, information should also not be all encompassing. Too much information may remove serendipity which is a reason for visiting the mountains in the first place (Field notes: Outdoor educator, Sept., 1992; Lucas, 1981).

6.5 POSSIBLE MANAGEMENT TECHNIQUES

Information about trail bicycling; it's meaning and behaviours; appears to be the key issue when managing this activity for conflict with other trail opportunities. Park staff and park users need to understand or at least appreciate the park appropriateness of trail bicycling. Information regarding the experiential opportunities achieved through trail bicycling will help to develop realistic perceptions of this activity and it's participants. Perceptions of park appropriateness and alikeness with other trail and park opportunities will help to make trail bicycling acceptable and reduce the amount of recreation conflict. Using persuasive communication is one technique to shape behaviour by assisting park visitors to make their own informed leisure decisions.

Recommendations for specific information requirements is beyond the scope of this research, but a broad framework of management tools currently used by other resource agencies can be given. The following are persuasive communication interventions, that are suggested to

reduce conflicts and promote multi-use trails in natural settings. The CPS may consider these techniques to reduce the recreation conflict potential caused by an increasing number of people riding mountain bikes on park trails and the negative belief of trail bicycle activities and experiences in national park settings.

6.5.1 Education

The central route to persuasion uses an information process to teach park visitors of appropriate behaviours. This strategy assumes the recipient: (1) has a high motivation to pay attention to message content, (2) has the ability to process the information, (3) accepts the message arguments, and (4) has the skills to act upon these arguments (Roggenbuck, 1992). The key to success for this kind of learning is to focus on the recipient, the message, the medium or channel of message transfer and the situation.

The recipients of trail and conflict information are all people who may be involved with recreation conflict, including park staff, residents and park visitors. The target audience is a wide range of people and therefore will require a number of different channels to transfer the appropriate messages. The medium of message transfer will vary from written word, to word of mouth, and audio-visual presentations. Managers will have to make decisions on appropriate channels based on their market analysis strategies and from what has worked in the past. The situation (timing and possible distractions) also has to be considered when deciding upon the most appropriate channels and type of message to be used.

The message and its argument is an important aspect of learning about the trail bicycling issues. "If arguments are weak, the message will be rejected and pre-existing positions and behavior will be reinforced" (Roggenbuck, 1992:173). Trail users and park staff need to be informed of: the appropriateness of trail bicycling (and other trail opportunity benefits),

expectations of trail behaviours, the environmental impacts of trail bicycling, which trails are open and closed, the reasoning behind trail decisions, and trail etiquette, to reduce current feelings of conflict. The messages have to be clear and require strong arguments for this persuasion method to work.

Information can be dispersed through existing message channels of brochures, interpretive programs, visitor centres, signs, school programs, service announcements, and park printed materials. However, education programs should also actively provide information through other channels to increase the chance of reaching the majority of targeted recipients. Targeted message recipients should also include: guiding and rental services, retailers, bicycle, hiking and other outdoor clubs, and any other group that may inform trail users of park related values and expectations. Many managers believe that their most effective management tool is personal contact with visitors. Personnel in the backcountry and visitor centres were considered more effective than contacts at meetings, school programs, brochures, signs and audio/visual presentations (Roggenbuck, 1992). Also wardens on bikes "often serve as an excellent role model for cyclists and have been successful in modifying behaviour simply by their presence" (Keller,1990:15). Many imaginative ways can be used to disperse the messages of the CPS.

For some people, informing visitor about the experiences of trail bicycling is a form of promotion and is considered an invitation for more people to use a limited amount of resources. This is not necessarily true, and through persuasion and other management techniques, trail bicycling can be used to re[illegible]ent park users to areas that were previously inaccessible or considered uninteresting. [illegible] strategies such as persuasive communication can be used to increase dis[illegible] [illegible]country use and reduce conflict by improving knowledge, attitudes and behavioural intentions (Roggenbuck, 1992).

Conflict can also be reduced by having the conflicting parties interact and get to know one another. The CPS can accomplish this by involving all trail groups in the decision making process and informing all park users of decisions and the underlying reasons behind those decisions. Feelings of conflict, from people in this study, were apparent when people perceived they were not getting the whole story about management decisions and/or not getting a reasonable opportunity to voice their opinions and needs. The process of decision making becomes as equally important to the decisions that are made for people to understand and respect the final results.

6.5.2 Enforcement

> Regardless of all education efforts, there are some individuals cyclist, hiker, or equestrian-who will bend or break the rules. Effective rule enforcement and appropriate penalties must supplement even the best education program. (Keller, 1990:45).

In addition to the persuasion interventions enforcement will be required to regulate those individuals who are not persuaded or have missed the park messages concerning trail bicycling and trail use. Enforcing rules in the backcountry is not a simple task. However, if trail users understand that regulations will be enforced, a stiff penalty for bicycle riding on closed trails may deter the casual law-breaker from giving all bicyclists a bad name. Trail users may also regulate themselves if regulations and rules are more commonly known.

6.5.3 The Broader Picture

The CPS needs to be aware of the broader scope of trail issues. Perceptions of trail users are also developed in urban and other park locations outside of the national park setting. Information and current trends are required to understand how people are making decisions and the for future trends. A few people who were interviewed expressed that they did not perceive a

difference between a "national park" designation and other parks such as provincial parks and urban parks. This means the CPS and the other park systems need to better inform the public of their mandates and expectations of their services. Communication between the park systems will be required so a continuum of recreation opportunities are available. It is then up to each person to make an informed choice concerning recreation opportunities dependent upon their desired experience and the designation of the park setting.

CHAPTER SEVEN

CONCLUSIONS

7.0 INTRODUCTION

> The challenge facing most park managers today is no longer how to attract visitors, but how to preserve park resources and quality visitor experiences while providing for visitor access and needs (Graefe, Kuss and Vaske, 1990:iii).

Park managers are becoming increasingly concerned with preserving resources while ensuring that opportunities they provide for outdoor recreation lead to satisfying recreation experiences for the users of these resources. However, social impacts, including conflict between users, influence satisfaction and can contribute or result in the depreciation of potentially high quality recreation experiences. Traditionally, recreation research and planning has focused on activities and settings to investigate recreation phenomenon. However, these approaches have limitations when examining recreation participation as dimensions of human behaviour. For this reason, behavioural perspectives are gaining importance as an approach to study social phenomenon of outdoor recreation.

The conflict generated by trail bicycling is one of the more recent phenomena to gain the attention of park managers. Conventional wisdom about trail bicycling has led to the development of current policies and management practices. However, such planning and management decisions need to be based on reliable information rather than solely conventional wisdom. The intent of this research was to supplement the current information base with a behavioural perspective to understand the activity and experiences of trail.

7.1 CONVENTIONAL WISDOM ABOUT TRAIL BICYCLING

The CPS has regulated trail bicycling in Banff and Jasper National Parks by restricting bicycle use to designated trails. This approach has been considered appropriate because there is a belief that: (1) the number of conflicts on the trails are high, (2) conflict is inherent between hiking and bicycling and, (3) trail bicyclists are perceived by hikers to be motivated by other than park appropriate experiences. Conflict is considered inherent because of unchecked speeds and the quietness of bicycles and the potential for collisions and threat to the safety of other trail users. Trail segregation, which reduces physical contacts between users, is believed to reduce the number of inter-group conflicts. This strategy however, will also reduce the number of trail bicycle opportunities available within the parks. Segregation of these activities is considered necessary to retain the quality of traditional trail experiences. Although, empirical research using surveys and activity definitions have generally supported this rationale and management decisions, the results of this study imply that alternative approaches may be used in managing the relationship between bicycling and other trail using activities.

7.2 REVIEW OF THE STUDY

The intent of this research was to explore the experiences of national park trail users and their attitudes toward conflicts associated with trail bicycling. An interpretive approach using the qualitative methods of participant observation and open ended interviews were considered the most appropriate methodology for obtaining the relevant information. An interpretive world view allows the researcher to be open to unexpected information which is grounded in an individual's perspectives and within a defined context. Understanding the issues as seen from the participant's view and in their own words should add new dimensions to the issues of trail bicycling and conflict. Complementary data to the traditional positivist approaches would also provide a more complete perspective of the phenomenon of conflicts resulting from trail bicycling. This

methodological reasoning is supported by Downing and Clark (1985) who support the contribution that qualitative, naturalistic, grounded inquiry has made towards understanding social issues in resources management.

The results of the interviews and participant observations suggests that to a large extent conventional wisdom is inappropriate and unfounded. Conflicts between trail users appears to be minimal and the potential for conflict is based on negative perceptions that are not inherent in trail activities. It was found that perceptions of conflict are based on stereotypes of trail bicyclists and the reckless behaviour of a few participants. The majority of backcountry bicyclists did not resemble the counter culture stereotypes as found in the media but were found to be considerate, appreciative of the natural aspects of the parks, and also participated as hikers. Participants in trail bicycling said that their experiences were similar to nordic skiing and that they believed their activity was park appropriate. Some hikers on the other hand, expressed that conflict existed because of the perceived inherent nature of the activity and the attitude of it's participants. Bicyclists are perceived to be different than hikers and whose behaviour will diminish the quality of traditional hiker experiences.

7.3 LIMITATIONS OF THE STUDY

This research attempted to investigate the phenomenon of trail bicycling and conflict associated with this activity. As grounded research, the results are context specific. Broad generalizations about trail bicycling or conflicts as found in this study cannot be made about situations outside of the research setting without discussions of validity. The data is also grounded in the time this research took place. One result of this research was that, attitudes and behaviours of trail users are changing, therefore the experiences found within this study may not be consistent with studies from the past nor the future. Thick descriptions of trail experiences can help to understand the development of trail behaviours, however, this qualitative approach

cannot express the number of people who are experiencing conflict or determine how important the issues of trail bicycling and conflict are toward a quality park experience. Additional studies will be required to test and quantify the present research to understand the generalizability and overall importance given to bicycle issues.

This study was also limited in scope to the trail users; bicyclists and hikers. For a complete picture of trail conflicts in the national park setting horse users should also be included. Motorized recreationists and other outdoor recreation users should also be included for a more accurate depiction of recreation conflict in other settings.

Finally, this study is limited by the nature of it being an academic learning experience. Ideally, long term observation and interviews by a well trained and funded researcher would result in the most appropriate information to answer research questions. Unfortunately, this research, like most, was limited in time and resources and, to a certain degree, limited by the experience of the researcher. Students are often developing research skills during the research process. This limits the quality of the data gathered at the beginning of the research process. The Jasper experience of this research exemplifies this point, where data recording procedures limited this experience as preliminary data. The limited knowledge and experience at the beginning of this research could not have been foreseen or eliminated but should be considered as one aspect of the research learning experience. Although not beneficial for the research findings, this procedure has been educational for the student researcher.

7.4 THEORETICAL DISCUSSION

The lived experience in the mountain parks revealed that conflict between trail users is not a serious problem. Most park visitors were found to be tolerant of trail bicyclists and this tolerance appears to increase with a person's experience with trail bicycling. A decrease in

tolerance also appears to increase perceptions of conflict. The potential for conflict was based on perceived incompatibility of trail bicyclists with current trail users. These perceptions were based on (1) stereotypes of urban trail users and their behaviours and transferred to the national park setting, and (2) on the personal meaning assigned to the activity of trail bicycling. The conflict theories of Jacob and Schreyer (1980) confirm what was found in the field. All four major factors behind outdoor recreation conflicts as identified by Jacob and Schreyer appear to be involved with conflicts associated with trail bicycling.

Non-bicyclists expressed concerns with activity style, where they believe that the activity style of trail bicyclists is the same as urban bicyclists who are out-of-control and are inconsiderate. There is the belief that trail bicycling also does not conform to traditional activity styles for trail use, and as a result potential conflict situations occur. People, who expressed that there was a potential for conflict, believed that trail bicyclists can go elsewhere, besides national parks, for their recreation. Jacob and Schreyer call this resource specificity. Mode of experience is another factor which park visitors expressed as a potential for trail conflicts. Non-bicyclists believe trail bicyclists are motivated by unfocused experiences such as quick movement. Non-bicyclists also believe unfocused experiences will effect their own focused experiences through interruption and not allowing them to achieve their own desired focused state because they are required to be constantly "looking over their shoulder" to prevent being startled or injured. Although lifestyle tolerance was not as overt an observation or theme in the data, it was apparent from the stereotypes non-bicyclists made of bicyclists that this factor existed in this context. Non-bicyclists appeared to be unwilling to share national park trails with "courier"-like bicyclists and people who have different values for the national parks. The main point to be made here is that most of the negative perceptions that non-bicyclists have of trail bicyclists are not based on direct contact with other trail users but were developed from images in the media, perceptions of bicyclists in other settings and from stereotypes spread by word of mouth.

Conflict between hikers and bicyclists was also found to be a dynamic process. Reported experiences of conflicts and perceptions of conflict from park residents have changed over time and there appears to be a trend towards fewer perceptions of conflict. Changes in perceptions of conflict may be a result of fewer people on the trails or trail users are becoming more familiar with bicyclists therefore more tolerant and understanding of what to expect with trail bicycling and the implications it has for other users. Further research is required to confirm these exploratory propositions.

7.5 PRACTICAL IMPLICATIONS AND RECOMMENDATIONS.

The major concern from a hiker's perspective is the conflict caused by unexpected encounters and "near misses". The current management strategy to physically separate bicycling and hiking as much as possible will not address these problems. Trails that are open to bicyclists are also open to hikers and are therefore still subject to problems of unfamiliarity for trail users toward expectations and appropriate behaviours.

The findings of this study imply that the CPS should examine how to educate and inform park users of the opportunities for experiences that are available within park settings. Persuasive communication such as the central route to persuasion, can help to change knowledge, attitudes and behaviours by providing information for trail users to make their own decisions. Persuasive communication has been found to be effective for both environmental and social impacts.

> (V)isitor conflict is as much a function of behavior and subjective perceptions as it is of density of use or reported encounters. Like environmental impacts, crowding and conflict rates are probably increasing, but not as rapidly as in the 1950s, 1960s and early 1970s. This is because growth rates in the use of many recreation environments have leveled off, because park visitors hold more realistic expectations, and also because behavior, at least at the wilderness end of the spectrum, seems to have improved (Roggenbuck, 1992:193).

Although the conflict between hikers and bicyclists is a relatively new phenomenon, it is believed that this conflict can also be managed through persuasive communication. This management tool is believed to be highly effective "especially in cases of uninformed, unintentional, unskilled and careless acts" (Roggenbuck, 1992:193). Trail bicycling conflicts fall into this category. Backcountry bicyclists were found to be considerate of other people and if a conflicting mishap occurred it was unintentional. Both hikers and bicyclists need to develop more realistic expectations about encounters, and be taught appropriate behaviours. Persuasive communication can also be used to redistribute trail users to alternative routes. Trails which are currently under used by hikers such as the Alexandra Trail in Banff National Park may be opened to trail bicyclists (it has been opened to bicyclists) to increase use and lessen trail congestion elsewhere. A single strategy using persuasive communication will not address the problems for hikers and trail bicyclists at opposite ends of the experiential spectrum. Different strategies of persuasive communication and continued physical separation of trail users is still required to reduce or eliminate feelings of conflict between backcountry users who have polar positions concerning activity or behavioural appropriateness in wilderness areas.

Using an approach such as persuasive communication is not a panacea for trail conflict in the national parks. People will continue to develop attitudes and behaviours outside of park settings and transfer them to parks. Attitudes, behaviours, and values about recreation and leisure are dynamic and may change with developments in technology, changes in environmental attitudes, and physical changes in the natural environment. Park managers will have to be informed of any behavioural or attitude change(s) and adapt them to their management plan. This information is also required if park agencies pro-actively play a role in changing attitudes and behaviours. The following are suggestions for further applied research concerned with trail bicycling and conflict:

(1) A trail monitoring system is required to be aware of the number and types of people using park trails. Information such as user densities and behaviours of people using the trails, when made available to the public, will inform users of what to expect while using certain trails. Park visitors may also use this information for making decisions on trail selection. Conflict will be reduced when appropriate information and trail choice is given to park visitors

(2) Monitoring is also required to establish the specific market using park trails. Information about trail users is required in order that persuasive communication techniques can accurately identify recipients. This information is needed to select the strength and content of a message, the source of the message, and the channel the message will be sent through.

(3) Horse users need to be incorporated into the trail conflict discussion. An investigation of backcountry horse travellers may be required to ground their experiences into the current research.

(4) Additional research is also required to confirm this study's findings. Quantitative methods may be used to empirically test the propositions made in this study. Longitudinal and latitudinal studies are also required to develop behaviour patterns over space and time which will allow research to become more predictive. Once specific themes or hypotheses are confirmed, these variables can be used to compare and contrast the physical, managerial and social settings of different parks. Research is required to understand the conflicting behaviours of urban trail users as well as national and other wildland park settings.

(5) Further research is required to understand the substitutability of trail bicycling with other outdoor activities. Understanding which activities and experiences can be interchanged may help to manage these activities and to ultimately understand the benefits these activities have for society.

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Appendix

CONFLICT MANAGEMENT OF TRAIL USERS IN BANFF NATIONAL PARK
RESEARCH PROJECT

THE RESEARCH QUESTION
Banff National park currently manages trail bicycling by 'monitoring the situation' and permitting this activity where visitor use conflict is not apparent. To date, apparent conflicts have been evaluated through visitor complaints and input from special interest groups. However, there are still out standing questions as to how trail users perceive each other and if their 'recreation experiences' are affected by the presence of another activity group as suggested by the current trail use policy. The purpose of this study is to identify and examine the conflict(s) between current trail users, bicyclists and hikers, through means of observation and interviews.

WHO IS CONDUCTING THE RESEARCH?
Researcher/Interviewer: Rob Zonneveld (433-2832)
Project Supervisor: Dr. Guy S. Swinnerton (492-5171)
Department of Recreation and Leisure Studies, University of Alberta
*- This project is not affiliated with the Canadian Parks Service.

PARTICIPATION IN THE STUDY
All participation in this project is strictly voluntary. The participant may, **at any time,** decline to answer any question or withdraw from the study, without any consequences to the participant. Upon request, participants will be informed of any information or procedures related to the research project. All attempts will be made by the researcher to minimize the intrusion put upon the participant (Interview lengths will vary and will last approximately for half an hour) and allow for a natural recreation experience.

PARTICIPANT IDENTITY WILL BE CONFINDENTIAL
To assure for the participants' anonymity, a code word (as selected by the participant) will be used to identify the individual and prevent association to any written or audio-recorded interviews. All information recorded on audio tape, field notes and transcribed documents will be kept strictly confidential for the exclusive use of this project. Audio-tapes will be destroyed upon completion of the study.

By signing this consent form, I am agreeing to participate in this project with the full knowledge that my comments will be kept confidential. I may also refuse to answer any question and may withdraw from the study without prejudice.

_____ _____
Participant Name Date

_____ _____
Researcher/Investigator Supervisor