

Bicycles are the most efficient form of movement on this planet and possibly no more or less environmentally friendly than the boots, clothes, packs and other apparatus outdoor recreationists use. Mountain-biking is the best and I love it! (Mountain-biking enthusiast, 1993)

**CONFLICT IN RECREATION:
THE CASE OF MOUNTAIN-BIKERS AND TRAMPERS**

A thesis
submitted in partial fulfillment
of the requirements for the Degree
of
Master of Parks and Recreation Management
at Lincoln University

By
Chrys Horn

Lincoln University

1994

ABSTRACT

Abstract of a thesis submitted in partial fulfillment of the requirements for the Degree of M. P. & R. Mgt.

CONFLICT IN RECREATION: THE CASE OF MOUNTAIN-BIKERS AND TRAMPERS

By Chrys Horn

Conflict in Recreation is a major problem for recreation managers who are trying to provide satisfying experiences for all recreationists. This thesis is about conflict between mountain-bikers and trampers. Mountain-biking has grown in popularity in new Zealand over the last ten years, and these increasing numbers have threatened the quality of walkers' and runners' recreational experiences, particularly in peri-urban areas.

Conflict is a complex social interaction process which occurs around times of change. It involves the interplay of perceptions and attitudes, behaviour, and an incompatible situation. This complexity required the use of a range of methods to successfully understand the conflict between walkers and mountain-bikers.

Like many other recreational conflicts, the conflict between bikers and trampers is asymmetrical - walkers dislike meeting bikers much more than bikers dislike meeting walkers. A majority of walker respondents disliked or strongly disliked meeting bikers on walking tracks. Walkers' questionnaire answers indicated that their greatest concerns with mountain-biking are (in order of decreasing importance) track damage and other environmental damage, personal safety, and the feeling that bikes interrupt their peace

and quiet. Further exploration during in-depth interviews show that the perception of these problems are closely related to the way different users feel about that places that they use, and the way meetings with other users can be incorporated into the experiences of the recreationist. For walkers, meeting bikers is far more intrusive than *vice-versa*.

Political activity aimed at eliminating bikers from many frontcountry areas means that bikers are now developing a dislike of trampers who they see as intolerant and arrogant. Therefore, behaviour affects the escalation of conflict. In addition, wider social change has had an influence on this conflict. Changing economic wellbeing, less regular work hours, a perceived lack of time and a wider choice of activities have all impacted on recreation patterns in peri-urban areas, and on this conflict situation.

In addition, this study has indicated that the concepts of *specialisation* and *substitution* may need modification. The use of qualitative methods has highlighted the narrow focus that researchers have used when studying these concepts. Both must be seen more broadly in the context of individuals' changing recreational needs both over the life cycle, and in the face of social change as outlined above.

KEYWORDS: *mountain-biking, motivations, preferences, conflict, goal interference, social change, substitution, specialisation theory, tramping, constraints, time deepening, Galtung Triangle, triangulation of methods.*

ACKNOWLEDGEMENTS

Many people and organisations have helped me in my efforts to investigate the situation that exists between mountain-bikers and trampers. Without them, in fact this research could not have gone ahead. First and foremost there are all the people that gave up their time to fill in questionnaires and to talk to me in person about their feelings and experiences. I never ceased to be impressed by the generosity of those that gave their time freely when they could have been out participating in their favourite activity! There were also those who helped put my questionnaires into envelopes so they could be sent out.

A big thank you to the Department of Conservation who helped by providing financial support for this research. It has certainly made the whole process easier.

As well as this, many of my work colleagues have been a big help along the way. They were there when I needed all sorts of help. Of these I particularly would like to mention my supervisors Pat Devlin and David Simmons for their suggestions and guidance along the way. Tracy Berno has been a source of inspiration and a major source of help during the long process of analysing data and wondering what it all meant! As well as this, Catriona McBean, Steve Sutton, Miranda Sikking, Simon Hedley, Stephen Espiner, Bob Ryan, Bruce Rendall, Liz Parkin, and Mandy Anderson have all helped with hints, comments, criticism, encouragement and companionship. It is impossible to mention all those in the department who have also helped with timely advice, information or just a friendly smile when the going was getting tough! The process has mostly been an enjoyable and learning experience thanks to the input of these people.

Most importantly of all, I would like to thank my partner Tussock. It is not always easy to live with someone who is writing a thesis and I appreciate the patience and practical support that I have received from him at the times when I have most needed it.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF TABLES	x
INTRODUCTION	1
1.1 Conflict	1
1.2 Mountain-Biking	3
1.3 The Research Area	4
1.4 Research Objectives	5
1.5 Thesis Organisation	6
LITERATURE REVIEW	7
2.1 Introduction	7
2.2 General Conflict Perspectives	8
2.2.1 Classical Views of Conflict	9
2.2.1.1 Marxism	9
2.2.1.2 Feminism	10
2.2.2 Microsociological Approaches to Conflict	11
2.2.2.1 The Role of Meaning	11
2.2.2.1.1 Language as Meaning	11
2.2.2.2 Game Theory	12
2.2.3 Structurationist Perspectives and Complexity Theory	16
2.2.3.1 Complexity and Chaos in Social Systems	16
2.2.4 The Cycle of Conflict	17
2.2.5 The Role of Conflict	17
2.2.6 Conflict - Broad and Narrow Definitions	18
2.2.7 Section Summary	20
2.3 Perspectives on Leisure	21
2.3.1 Perceived Freedom	21
2.3.2 Flow	21
2.3.2.1 Control	22
2.3.3 Response to Crowding	23
2.3.3.1 Motivations	23
2.3.3.2 Expectations	23
2.3.3.3 Preferences	24
2.3.4 Expectations, Motivations, Control and Freedom	24
2.3.5 Section Summary	25
2.4 Conflict in Recreational Settings	25
2.4.1 Increasing Conflict in Recreation	25
2.4.2 Situational Factors in Recreational Conflict	26
2.4.3 Criticisms of Past Research	27
2.4.4 Section Summary	28
2.5 Conflict as Goal Interference	29
2.5.1 Activity Style	29
2.5.1.1 Specialisation Theory	29
2.5.2 Environmental Relation	31

2.5.2.1	Sense of Place	31
2.5.2.2	Place Attachment	32
2.5.2.3	Behaviour Settings	33
2.5.2.4	Scripts	33
2.5.2.5	Schemes of Order	33
2.5.2.6	Familiarity	34
2.5.3	Mode of Experience	35
2.5.4	Tolerance of Lifestyle Diversity	35
2.5.5	Comparing Conflict with Crowding	36
2.5.6	Perceptions of Difference	37
2.5.7	The Galtung Triangle	37
2.5.8	Section Summary	39
2.6	Conflict Between Bikers and Walkers	40
2.6.1	Off-Road Biking Figures	40
2.6.1.1	Limitations of Biking Figures	40
2.6.1.2	Estimates of Off-Road Biking in New Zealand	41
2.6.2	Attitudes and Perceptions	42
2.6.3	The Political Arena	44
2.6.4	Section Summary	44
2.7	Chapter Summary	44
METHODOLOGY		47
3.1	Introduction	47
3.2	Epistemology and Ontology	47
3.2.1	A Humanist Framework	48
3.2.2	Quantitative Methods	50
3.2.3	Qualitative Methods	52
3.2.4	Section Summary	53
3.3	Data Collection	53
3.3.1	In Depth Interviews	54
3.3.2	Participant Observation	57
3.3.3	Questionnaires	58
3.3.4	Response Rate	59
3.4	Data Analysis	61
3.4.1	Analysing Questionnaire Data	61
3.4.2	Analysing Qualitative Data	61
3.5	Limitations	62
3.6	Chapter Summary	63
RESULTS		65
4.1	Introduction	65
4.2	Macrosociological or Situational Factors	67
4.2.1	Mountain-Biker Profiles	67
4.2.1.1	Sex Distribution	67
4.2.1.2	Perceived Competence and Competition	69
4.2.1.3	Age	70
4.2.1.4	Participation in the Older Age Groups	71
4.2.1.5	Club Membership	72
4.2.1.6	Education	74
4.2.1.7	Bikers' Past Outdoor Experience	75
Motocross		75

Cycling	76
Bikers with Other Outdoor Experience	77
4.2.2 Off-Road Use	78
4.2.2.1 What is a Mountain-Biker?	78
4.2.2.2 What is <i>Off-Road</i> ?	79
4.2.3 Estimates of Off-Road Use	79
4.2.3.1 Questionnaire Estimates of Off-Road Use	80
4.2.4 Frequency of Use	81
4.2.5 Where Do Bikers Bike?	81
4.2.6 Styles of Riding	83
4.2.6.1 Racing	83
4.2.6.2 Training	84
4.2.6.3 Recreational Riding	84
4.2.7 Preferences for Tracks	85
4.2.8 Hazards	86
4.2.8.1 Hypoglycaemia	87
4.2.8.2 Dehydration	87
4.2.8.3 Breakdowns	88
4.2.9 Wider Social Influences	88
4.2.9.1 Economics.	88
4.2.9.2 Time	89
4.2.9.3 Time Deepening	90
4.2.9.4 Time Deepening and Postmodern Analyses	91
4.2.10 Substitution	92
4.2.10.1 Implications for Further Research	93
4.2.11 Mountain-Biking and Specialisation	95
4.2.12 Section Summary	96
4.3 Microsociological Factors	97
4.3.1 The Existence of Conflict	97
4.3.1.2 Strategies	99
4.3.2 Who Hates Whom?	100
4.3.3 Perceptions of Difference	101
4.3.4 Envy	103
4.3.5 Feelings of Threat	103
4.3.6 Tradition	103
4.3.7 Image	104
4.3.7.1 Media Image	105
4.3.7.2 Combatting the Bad Image	105
4.3.8 Tolerance	106
4.3.9 Environmental Attitudes	107
4.3.10 Focus	109
4.3.10.1 Physical Fitness	111
4.3.10.2 Excitement / Thrills	111
4.3.10.3 Challenge and Skill	112
4.3.10.4 Flow	112
4.3.10.5 Mode of Experience	113
4.3.10.6 Appreciation	114
4.3.10.7 Changing Focus with Age and/or Experience	115
4.3.11 Past Experience and Relationship to Place	116
4.3.12 Mode of Experience and Conflict	118
4.3.13 Specialisation	118

4.3.14 Specialisation into Place	119
4.3.15 Mountain-Biking and Place Identity	121
4.3.16 Walkers' Experiences of Meeting Mountain-Bikers	122
4.3.18 Experience Styles	123
4.3.19 Role of Control	124
4.3.20 Section Summary	125
4.4 Behaviour	127
4.4.1 Political Activity	127
4.4.2 Organisation	129
4.4.3 Compliance	129
4.4.4 Access Issues	130
4.5 Chapter Summary	131
SUMMARY AND CONCLUSIONS	134
5.1 Introduction	134
5.2 Summary of Research Findings	134
5.2.1 Theoretical Base	134
5.2.2 Macrosociological Bases of Conflict	135
5.2.3 Microsociological (Subjective) Aspects	137
5.2.3 Behaviour	140
5.3 Implications	141
5.4 Side Issues	145
5.4 Further Research Opportunities	146
5.5 Final Word	147
BIBLIOGRAPHY	149
PERSONAL COMMUNICATIONS	159
INTERVIEW CONTACTS	160
APPENDICES.	163

LIST OF FIGURES

Figure 1: The Prisoner's Dilemma (adapted from Axelrod, 1984:8)	13
Figure 2: Conceptual Model of Recreational Conflict (adapted from Bury <i>et al.</i> 1983:403).27	
Figure 3: Trampler/ Hiker Specialisation (From Bryan, 1979:66).	30
Figure 4: The Galtung Triangle (In Bercovitch, 1984:6).	38
Figure 5: Sex Distribution of Bikers and Non-Bikers.	68
Figure 6: Age Groups of Bikers and Non-bikers.	70
Figure 7: Educational Qualifications of Bikers and Non-Bikers.	74
Figure 8: Previous Experience with Motorised Trail-Bikes.	75
Figure 9: Participation in Other Outdoor Activities.	78
Figure 10: How Bikers Used Their Bikes During the Last Year	80
Figure 11: Frequency of Use Off-Road During the Last Year.	82
Figure 12: Places that Bikers Ride their Bikes.	83
Figure 13: Substitution Types (from Shelby and Vaske, 1991: 23)	94
Figure 14: Feelings about Meeting Walkers	98
Figure 15: Feelings about Meeting Runners	99
Figure 16: Feelings about Meeting Bikers	100
Figure 17: What Bikers think Trampers Dislike About Mountain-Biking.	104
Figure 18: What Trampers Feel are the Problems with Mountain-Biking.	107
Figure 19: Trampler's Motivations for Tramping.	109
Figure 20: Motivations for Mountain-Biking.	110

LIST OF TABLES

Table I	60
---------------	----

Chapter 1

INTRODUCTION

1.1 CONFLICT

Conflict in recreation is a concern for recreation managers, because conflict stops people from achieving full satisfaction from their chosen activity (Jackson, 1989; Driver and Tocher, 1970). Dissatisfied recreationists may move to places offering better conditions. This change then impacts on recreationists already using the new area and they, in turn, will have to move to find *their* preferred conditions. In this way, changes in one area can trigger changes in more remote places, causing a kind of *recreational succession* or *further up the valley syndrome* (Devlin and O'Connor, 1988: 181; Nielsen, Shelby and Haas, 1977).

Outdoor recreation management is often linked to managing for nature conservation (Devlin and O'Connor, 1988). Managers must balance the conflicting priorities of conservation and different recreational activities, a task that Dunn (1980) considers to be one of the most difficult land managers have to address. The New Zealand Department of Conservation is frequently torn between its roles of focusing on conservation and of

encouraging the sort of recreational use that turns individual recreationists into advocates for conservation (Hislop, 1989).

Without good quality recreational experiences in natural areas, there will be little public concern for nature conservation, but conservation also requires limits on recreational use. With experience, people's sensitivity to negative environmental impacts increases (Schreyer, Lime and Williams, 1984) and they become more emotionally attached to their recreational resource (Moore and Graefe, 1994; Williams, Patterson, Roggenbuck and Watson, 1992; Bryan, 1979). Thus, potential advocates for conservation, are unlikely to develop a strong conservation focus until they have had many satisfying recreational experiences in natural settings (Williams *et al.*, 1992; Bryan, 1979). This is at the heart of the conservation - use paradox.

Because conservation depends on public support, managers must try to provide opportunities for a wide range of recreational tastes; from opportunities for people to enjoy nature through to opportunities to focus mainly on their chosen activity. Balance is difficult to achieve, because those out to enjoy nature who are the strongest advocates for conservation are also most easily affected by the impacts of other users. Conversely, people with an activity focus need the opportunity to participate in their chosen recreation in order to develop this conservation focus. This difference in focus, in itself, may cause conflict, and displacement of experienced users (Bryan, 1979). Additionally, conflict in recreational settings may displace less experienced users, preventing them from developing a conservation focus. On the other hand, restricting the types of activities allowed in natural areas, could engender resentment amongst people who are excluded (Jackson and Wong, 1982).

Conflict in recreation is an inevitable result of increasing demand for outdoor recreation opportunities at the same time as new technologies are increasing the range of activities

in which people can participate. Increasing demand puts more pressure on recreation resources, especially in peri-urban areas. Additionally, different activities may not mix well, as evidenced by documented conflicts such as those between canoeists and motorcraft users (Driver and Bassett, 1975), fishers and canoeists (Driver and Bassett, 1975), and skiers and snowmobilers (Butler, 1982). Conflict is noticed when one user group begins exerting political pressure, either directly or through the media, on administering bodies to exclude others. Initially this can take the form of telephone or written complaints and later it may become more intensive with lobby groups being formed to push for desired ends.

Occasionally conflict may be reflected in the behaviour of the different users when they meet in the recreational setting, however the literature does not record this.

Recreationists, who dislike meeting other user groups, may greet them in a friendly or neutral manner (Adelman, Heberlein and Bonnicksen, 1982) which develops and maintains the asymmetrical conflict situations commonly found in recreation settings.

1.2 MOUNTAIN-BIKING

This study arises from the development of mountain-biking, a sport centred around cycling off the road, over varied terrain, on bikes built to withstand hard knocks and rough treatment. Modern day mountain-biking, as defined in this study, began back in the late 1970s in Northern California when two men - Gary Fisher and Charles Crow - built the first *clunkers*. The fine art of *clunking* has since spread across the world and clunkers have developed into sophisticated machines with complex suspensions, lightweight frames, highly effective brakes, and tyres for every possible set of conditions.

Mountain-bikes became a significant user group in New Zealand during the mid 1980s (Chalmers, 1989). Today mountain-bikes are very popular: sales in New Zealand have grown over the last five years to comprise a majority of the cycle market at the present

time, although this growth is levelling out. These figures were gained through interviews with people in the cycle industry. Mountain-bikers dressed in their padded cycling shorts and bright lycra tops are now a familiar sight on tracks that were once the domain of walkers only. Comments and complaints to organisations, such as local councils and the Department of Conservation, have indicated that there is a conflict problem that needs addressing. Additionally, literature from the United States documents problems associated with mountain-biking (for example, Goldstein, 1987; Jacoby, 1990).

In many respects, walkers' dislike of mountain-bikers is unexpected. Many trampers¹ and walkers cycle, and cycling is usually considered environmentally friendly.

Additionally, many mountain-bikers are also active trampers and therefore, are not so very different from walkers. Conflict between walkers and bikers therefore could be expected to be of less intensity than the conflict between skiers and snowmobilers or canoeists and motor-craft users. However, to the person who felt that letting mountain-bikes use walking tracks was *about the equivalent of suggesting that a gang of sharks be released into [a local swimming pool]* (*The Press*, 20th July, 1992:2), this assumption is obviously incorrect.

1.3 THE RESEARCH AREA

Initially the research was to be a case study of use on the Heaphy Track, however, early publicity eventually prevented the study going ahead. Some members of the Nelson Conservation Board felt that running such a study was tantamount to encouraging mountain-bike use on the Heaphy Track. Instead, the research was changed to a more general study based in the Canterbury area. An important area of investigation was the Port Hills, near Christchurch. Being close to a city of 308 000 people, the Port Hills is frequented by a variety of recreational groups including walkers, rock climbers,

¹. Tramping is the New Zealand equivalent of hiking.

parapenters, hang gliders, runners, canoeists, motorcyclists, cyclists, mountain-bikers, horse-riders, sightseers and picnickers (Canterbury United Council, 1986).

The proximity of these many and varied users makes the Port Hills an excellent site to begin a study on recreational conflict. However, the study was not area specific. A range of sites were discussed with respondents and sampling occurred in Wellington, Arthur's Pass, and near the Lewis Pass, as well as in the Christchurch region. Although the focus of this study was primarily on conflict between mountain-bikers and walkers, many other conflicts were mentioned by respondents throughout the course of the research. Runners, dog owners, horse-riders, trail bikers and even large groups of walkers were all mentioned as a nuisance by other users on the Port Hills. It does appear, however that mountain-biking has given rise to more complaints than most of these other groups (Turner, 1992, Pers. comm.).

1.4 RESEARCH OBJECTIVES

Very little empirical research has been done on mountain-biking either here or overseas. Some other studies have been done specifically with the aim of highlighting places that may be considered physically suitable for mountain-biking (e.g. Sarah Gerard and Associates, 1992). There are also many articles in the popular press debating the impacts of mountain-bikes (for example, McKerrow, 1989). Many mountain-bikers that I spoke to felt that there was no conflict, however this largely seemed to depend on how conflict was defined. Additionally, some authors have suggested that previous research into recreational conflict has had little application because it lacks a theoretical base. The objectives of this research had to reflect these problems. They are as follows:

1. to establish and test a firm theoretical base from which to understand this and other recreational conflicts. This, ultimately, should make this research applicable to conflict in other recreational settings;

2. to clarify the existence and extent of conflict in this setting;
3. to record mountain-bikers' demographic profiles, and to look at their motivations, satisfactions, preferences, previous experience and future aspirations;
4. to compare the activity of mountain-biking with that of tramping; and
5. to understand the underlying factors in the conflict between mountain-bikers and trampers. These include influences in both the social and social-psychological settings in which the conflict is occurring.

1.5 THESIS ORGANISATION

Chapter 2 provides a literature review that outlines current understandings of conflict in general and then focuses in on previous studies of conflict in recreational settings.

Chapter 3 records the methods used to find answers to the question outlined above. Issues of epistemology, validity and reliability are also discussed in this chapter.

Chapter 4 records and interprets the results of the research using the Galtung Triangle (outlined in Chapter 2) as the organisational framework for the chapter, while Chapter 5 concludes the thesis.

Chapter 2

LITERATURE REVIEW

2.1 INTRODUCTION

Conflict is easily understood in a lay sense, however there are arguments about how to define it for academic purposes. Should *conflict* refer to all problems that manifest between two groups, or specifically to behaviours such as overt physical aggression? What is common to the wide range of situations that are labelled *conflict*? The answers to these questions are vital to deciding on how to analyse recreational conflict and in understanding conflict across the range of recreational settings (Owens, 1985).

This review covers a range of different perspectives on conflict. Denzin (1989) suggests that researchers should investigate a subject in as many different ways as possible, employing a range of theoretical perspectives, a range of methods and even a range of researchers. Usually theories, methods and researchers complement, rather than compete with each other (Denzin, 1989; Simmons, 1985), so using a range of theoretical perspectives is likely to result in better data collection and more valid interpretations of that data.

Perceptions, attitudes and situational factors influence each other to either augment or diminish the conflict (Bercovitch, 1984; Kreisberg, 1973; Fink, 1968). Some theoretical perspectives emphasise the role of only one factor, while ignoring the influence of the others, hence employing a variety of perspectives is more likely to yield the best possible understanding of conflict and its associated processes. Differences in perspective also exist in the study of leisure and recreation. Leisure has been conceptualised in terms of time, activity and experience (Ellis and Witt, 1991) resulting in different ideas of how to manage recreation settings. Thus, part of this literature review discusses leisure meanings and the aspects of recreation behaviour that aid our understanding of conflicts in recreation settings.

This chapter discusses conflict, compares conflict in recreational settings with other forms of social conflict and outlines the theoretical bases of this study. A review of the literature on recreational conflict follows. There are few papers documenting research into conflict between mountain-bikers and trampers, however there are many articles published in the popular media that provide some insight into the issues within this setting. These articles are reviewed at the end of the chapter.

2.2 GENERAL CONFLICT PERSPECTIVES

Underlying many of the theoretical perspectives on conflict are arguments about the relative roles of *structure* and *agency* in human societies. People who think that social processes and human behaviour result from the *structure* of society are referred to as *structuralists* or *macrosociologists* (Giddens, 1984). To radical structuralists, individuals are constrained and controlled by the norms and values espoused by the society into which they are born. An individual is merely a small part of society. In comparison, sociologists who advocate a focus on individuals or *agents* are known as *microsociologists* or sometimes, *interactionists*. They think that a coherent society forms as a result of the actions, interactions, interpretations and beliefs of individual actors.

Between these two extremes, different theoretical perspectives vary in the relative influence they attribute to structure and agency (Mitchell, 1968).

The following section looks at some of these arguments in more detail in order to establish a general framework for understanding conflict.

2.2.1 CLASSICAL VIEWS OF CONFLICT

Classical theories of conflict are also theories about the structure of society and about the way society allocates resources and values. Consequently, they have become one of the major themes in sociology (Landis, 1992). Conflict is clearly related to issues of power and authority (Craib, 1984), and is inherent in politics, whether public decisions are about values or about physical resources.

There are four themes in classical theories of conflict (Collins, 1990). First, groups within society are seen to have differential access to resources and power, that is, they are stratified. Stratification is based on factors such as economic status, ethnicity, age, or gender. Second, groups aim to maintain their own positions of domination or, at least, to avoid domination by others. Third, the relative success of the different groups depends on their access to resources. These include material resources, social influence or resources for shaping emotions and ideas. Fourth, conflict is the driving force behind social change, and long periods of stability are periodically interrupted by times of intense conflict between groups struggling over power and authority. Two examples of conflict theories are marxism and feminism.

2.2.1.1 Marxism

Marx postulated that capitalist societies are stratified according to the mode of production of the different classes. According to Marx, it is difficult to move out of the class of one's birth, thus classes have a relatively fixed membership. The bourgeoisie hold power and authority in capitalist societies. They control capital and exploit the labour of the

proletariat, or the working class, who are forced to sell their labour in return for economic gain. Conflict results when the underclasses act collectively to correct this imbalance of power and wealth (Mulgan, 1994; Collins, 1990; Craib, 1984). In this perspective, individual struggle has little effect - only if the underclasses act collectively will they effect any change in the balance of power.

2.2.1.2 Feminism

Feminist theory is also a form of conflict theory, but, to feminists, society is stratified on the basis of gender. Radical feminists think that women are oppressed by men through the patriarchal structures that make up our society. Social life centres around the needs of men rather than those of women, thus women are continually in conflict with men whether they know it or not. Women who do not recognise their disadvantage have, apparently, been fooled by the system which has socialised them (Chafetz, 1988).

Proponents of these conflict perspectives consider that conflict exists regardless of whether the parties in conflict interpret it as such. A macrosociological focus implies that structure is more important than agency and that the researcher can remain external to the social life under study so it is possible to be *objective* in assessing a conflict situation. Macrosociologists focus on situational factors such as inequalities between groups in their access to resources and their relative abilities to effect change.

While classical conflict theories have been formulated by those taking a macrosociological, objective approach, social psychologists who look at the microsociological level of individuals and small groups, have done much research into conflict and conflict resolution. Therefore, a microsociological focus has also proven useful in conflict research.

2.2.2 MICROSOCIOLOGICAL APPROACHES TO CONFLICT

Theorists taking a microsociological (or *subjective*) stance assert that conflict is based on values which, in turn, are based on individual perceptions and interpretations (Bercovitch, 1984). Thus, to understand conflict, one must understand individual perceptions of the situation. In a wider context, social-psychologists think that understanding the way individual actors construe a situation is vital to understanding their behaviour in that situation. At the same time, the setting (the objective factors) plays an important part in the way individuals interpret the situation (Ross and Nisbett, 1991; Worchel, Cooper and Goethals, 1991). Symbolic interactionists also focus on individual actors and the ways in which, at the micro-level, people negotiate meanings with significant others.

2.2.2.1 The Role of Meaning

Rosenberg (1988) argues that one cannot understand what is going on merely by observing and describing the behaviour of people. People expect their actions to result in particular outcomes. Individuals act aggressively because they are conscious of their own disadvantage, or potential disadvantage. Aggression may give vent to the associated feelings of anger and frustration, but, if channelled correctly, it changes the situation. Individual understanding of socially constructed rules gives meaning to the actions of others and of ourselves (Rosenberg, 1988; Giddens, 1984).

2.2.2.1.1 Language as Meaning

Language exemplifies this point. Each language has its own rules so that one person can communicate meaning to others who know the rules. Further, like other social systems, language is continually changing and evolving. The rules are not immutable general laws, obeyed without question: each individual is free to break the accepted rules, although they risk being misunderstood (Rosenberg, 1988). Therefore, language is subject to frequent change in particular settings as seen in the development of jargon and colloquialisms. In a different context, the new rules may not be understood and communication breaks down.

Although individuals with a common culture will have rules in common with each other, groups within the culture will form or adapt their own rules (Moorhead and Griffin, 1989; Brown, 1988; Mullen, 1987). The different rules change the meaning of a behaviour, thus outsiders may interpret group behaviour differently from group members. In some cases, conflict develops as a result of the misunderstanding. This process demarcates groups from each other, helps individuals develop their identities as members of particular groups (Brown, 1988) and encourages the development of categorisations and stereotypes (Lilli and Rehm, 1988; Brown, 1988). The process of evaluation also happens within the recreational sub-groups to which individuals belong during their leisure careers.

2.2.2.2 Game Theory

Game theory provides a useful way of understanding the outcomes of conflict situations. Game theorists divide conflict into zero-sum and non zero-sum. Zero-sum conflict is also described as *pure competition, in which one party's gain is the other party's loss*. Game theory is based on the more common mixed-motive or non zero-sum conflict which can be resolved to benefit both groups. The *prisoner's dilemma* is one game based on these mixed-motive conflicts, and describes a situation common in conflicts in Western Societies (Worchel *et al.*, 1991).

Originally, the situation described the dilemma of two prisoners locked in separate cells, suspected of a murder. There is enough evidence to convict each of a minor offence, involving a short sentence, but to convict one or both prisoners of the murder charge, the judge needs evidence from the prisoners themselves. Each prisoner can either confess to the minor offence, or testify against the other prisoner. The resulting sentences will be as follows: if both confess, they both get short sentences; if both testify they both get long sentences. If prisoner A testifies and prisoner B confesses, then prisoner B gets the long sentence while prisoner A goes free, and *vice versa*.

		Column Player (C)	
		<i>Cooperate</i>	<i>Defect</i>
Row Player (R)	<i>Cooperate</i>	R=3, C=3 Reward for cooperation win/win	R=0, C=5 win/lose
	<i>Defect</i>	R=5, C=0 win/lose	R=1, C=1 Punishment for Mutual Defection lose/lose

Figure 1: The Prisoner's Dilemma (adapted from Axelrod, 1984:8)

The concept has been adapted for computer simulations. In the revised game, the idea is to score points and these points are awarded in a similar ratio to the sentences of the prisoners. What is significant, is that the highest reward an individual gets is for defecting (testifying) when her/his opponent confesses (co-operates). Axelrod's (1984) adaptation of the game makes the score for mutual defection slightly higher than the score for being "sucked in" to co-operating when one's opponent defects. The dilemma arises because, at the individual level, the most rational strategy appears to be to defect as shown in Figure 1.

Imagine you are the row player, trying to maximise your score. If you expect the column player to co-operate, you can either co-operate, so your score is three, or you can defect and your score will be five. Thus, when your opponent co-operates, it is better to defect. Alternatively, if you expect your opponent to defect, you can co-operate and your score will be zero; or you can defect and your score will be one. Thus it is still better to defect (Axelrod, 1984).

But, if the other player follows the same logic, they too, should always defect. When both players defect, both score one point which is less than the three points that each would get if both chose to co-operate. Individual rationality, therefore makes little sense

at the collective level, hence the dilemma (Axelrod, 1984: 8-9). Runge (1992) draws attention to the social context in which co-operation normally occurs. While the prisoner's dilemma, in its original form, saw the game played between two prisoners who were not allowed to negotiate, in most real situations, negotiations are possible and repeated plays are likely.

This game describes the same situation that Hardin (1968) discusses in his paper *Tragedy of the Commons*, while Bromley (1992) specifically relates the prisoner's dilemma to questions of the use of commons and common property. People can co-operate, and control their use of the commons, so that the commons continue to provide for all in perpetuity, thus maximising collective benefit; or they can defect, and use the commons to maximise their individual profit. In the latter case the commons may eventually become unproductive or have little utility for all concerned. If one group defects while the other co-operates, then the rewards are highest for the group that defects (they take over the commons, maximising their benefit at the cost of all users), and lowest for the co-operative group who minimise or lose their benefits.

Unlike Hardin (1968), Axelrod (1984) argues, convincingly, that in situations where the game is played many times over, defecting is not the best strategy and being inclined to co-operate is an individually rational and adaptive strategy both at the biological and social levels. If there is a chance of another meeting, co-operation becomes the most adaptive strategy because at later meetings your opponent can retaliate.

Heywood (1993) applies these types of games to outdoor recreation situations. He describes co-operation games and co-ordination games. The prisoner's dilemma is a co-operation game. In the recreation setting leaders of public interest groups may negotiate with each other so that each group agrees to limit their use to specific areas, allowing both groups satisfying experiences, but in a limited number of places. Where collective

co-operation is required however, a single individual might defect either through ignorance or intent. Heywood argues that the threat of collective sanctions in the face of individual defection should encourage members of an activity class to regulate the behaviour of its own members. In the case of mountain-bikers, for example, all mountain-bikers should regulate the behaviour of other mountain-bikers especially in the face of threats to deny access to the mountain-biker group as a whole.

With a group as diverse as mountain-bikers, it is possible that there will be individuals who defect and who are relatively impervious to group sanctions as they do not yet identify themselves as part of the bigger group. Teenaged bikers, for example, may identify more strongly with other teenagers than with other mountain-bikers and thus their activities will be less easily regulated by mountain-bikers (Barnes, 1992). Also in a situation where the individual feels anonymous, and is unlikely to meet people they know, they will be more likely to defect, that is, the risk of meeting the same people is low.

Coordination problems apply to questions such as who has the right-of-way on multiple use paths. Heywood (1993) argues that it makes little difference what the rules of *who yields to whom* stipulate, but the incentive to comply, comes from the possibility of accidents and injury. Again Heywood recognises that some form of policing may be required to force the actions of individuals within the groups concerned to conform to agreements.

Game theory views conflict as the result of individual choices and behaviour.

Understandings gained from conflict also show that structure or the actions of collectives will influence the choice of individuals in the same way that individual actions contribute to collective organisation.

2.2.3 STRUCTURATIONIST PERSPECTIVES AND COMPLEXITY THEORY

The implication that macro- and micro- sociological approaches are mutually exclusive is misleading (Giddens, 1984). The two complement each other in many research situations, hence it seems sensible to study both the context and individual interpretations of it. Similarly, complexity theory predicts roles for both structure and agency in influencing human social behaviour.

The social systems in which conflict occurs are complex, interactive and non-linear. Individual behaviour depends on the behaviour of many other actors in the system as well as on the total environment in which they operate (Ross and Nisbett, 1991). Added to this, individuals are capable of learning and adapting to the myriad of changes in a wide range of different ways. Because of their complexity, social systems are sometimes considered similar in nature to weather systems and biological systems (Ross and Nisbett, 1991:18; Waldrop, 1992).

2.2.3.1 Complexity and Chaos in Social Systems

Chaos Theory (explained by Gleick, 1987) and new understandings of complex systems (for example, Waldrop, 1991) suggest that they are inherently unpredictable, especially in the long term. While there may be long periods of apparent stability in social systems and weather systems, alike, massive change can occur at any time, apparently without warning. In chaotic systems, tiny differences in initial conditions may yield very different outcomes (Gleick, 1987). Meteorologists have coined the term *the butterfly effect* to describe the way the fluttering of a butterfly's wings in one part of the world can trigger tornadoes or similar events in another part of the world. Thus, complex systems, including social systems, are unstable and largely unpredictable *in the long-term* (Gleick, 1987).

This unpredictability means that there are no long term answers to social problems. Instead, management systems require constant adjustment, implying that conflict would

be better managed before it escalates into a major problem and that it needs continual surveillance. The difficulty lies in recognising a potential or latent conflict situation. Priesmeyer (1992) asserts that these systems are unpredictable only because of our current lack of knowledge and our inability to assess the initial conditions accurately. Thus, the more we are able to understand the system and the interaction of its components, the more predictable it becomes *in the short term*.

Thus, the primary aim of any social research should be describing and explaining, with a minimum of emphasis on prediction. After all, if the success of research into weather in New Zealand had been judged on its predictive outcomes, it is unlikely it would have continued.

2.2.4 THE CYCLE OF CONFLICT

Some individuals may live contentedly in a situation that outsiders may interpret as disadvantageous to them, while others may perceive conflict, even when there appears to be little reason for incompatibility (Tillet, 1991). Kreisberg (1973:18), links the two sets of factors as follows;

Situations which an observer assesses to be conflicting but which are not so assessed by partisans do not constitute social conflicts. We refer to such situations as objective, potential, or latent conflicts.

Kreisberg's (1973) cycle of conflict begins with this objective or latent, conflict which becomes *manifest* as groups become aware, or conscious, of their disadvantage.

However, only when individuals inside the conflict setting collectively become aware of their disadvantage will outsiders notice conflict. Recreational conflict can go unnoticed until dissatisfied individuals express their opinions, for example, by moving to a new recreational resource or laying a complaint with authority.

2.2.5 THE ROLE OF CONFLICT

Marxists and feminists predict an end to conflict once the inequalities in society disappear through the struggle of the underclasses. In comparison, complexity and

microsociological approaches predict that conflict and competition are inextricably linked to change in human systems (Waldrop,1992). Conflict is an ongoing process that allows groups to evolve and adapt to change. Even where one group wins and another loses as the result of conflict, conditions change over the course of the conflict and adaptation is required of both winners and losers.

When seen this way, it is possible to acknowledge some of the benefits of conflict.

According to Worchel *et al.* (1991:355), conflict;

initiates social change, motivates creative solutions to problems, promotes individual and group identity and initiates self-evaluation.

Conflict can prevent stagnation, stimulate interest, encourage people to examine problems and provide the motivation for solving them. It can stabilise relationships, help to release tensions and encourage critical self-reflection, thus providing the basis for social change and personal growth. However, the positive outcomes of conflict depend on its resolution. If unresolved, the outcomes are likely to be maladaptive and destructive (Tillet, 1991). The challenge is to harness understandings of conflict and associated processes to facilitate the positive outcomes and avoid the destructive ones, that is, to promote win-win situations.

2.2.6 CONFLICT - BROAD AND NARROW DEFINITIONS

Conflict theories can also be classified as broad or narrow in approach (Bercovitch, 1984; Fink, 1968). Proponents of a narrow approach recognise conflict only when competing groups are openly trying to eliminate, damage, or injure each other, as in the case of overt war (Fink, 1968). In comparison, Dahrendorf (1959, cited in Bercovitch, 1984; Fink, 1968) argues that conflict should include psychological antagonism such as tensions, disputes, contests, competitions and overt struggles.

Obviously, recreational conflict is not *conflict* in the sense that Fink (1968) discusses. However, Maiolo (1981, cited in Ivy, Stewart and Lue, 1992) asserts that conflict does

not exist until individuals take steps to exclude others from participation through political lobbying. This amounts to a narrow view of recreational conflict and is in direct contrast to Owens (1985: 252), who takes a broader approach by contending that;

. . . conflict should not necessarily be thought of as synonymous with confrontation, it may be an altogether more subtle process including simmering discontent and frustration. . .

Recreational conflict usually escapes notice until lobbying begins, hence a narrow definition is used by default. However, dissatisfaction may have to be high before political activity begins. Age, experience, occupation and income all influence an individual's propensity to lobby. In general, those in lower socio-economic groups are less likely to complain to the authorities (Sewell and Coppock, 1977), as are people without the knowledge of *whom* to lobby, or *how* to lobby. People also need time to lobby, so that anyone with a full time job, or with family commitments is less likely to approach authorities. Therefore, using complaints as an indicator of recreational satisfaction is likely to disadvantage some user groups.

As conflict escalates, it also becomes more difficult to manage, thus, ideally, it should be managed before groups move to exclude each other. However, because of the characteristics of complex, chaotic systems, managers who intervene in the early stages of conflict, cannot be certain that their early interventions prevented the escalation of the conflict. No-one could be certain that it was going to develop in the first place. The only clear feedback available to people in this situation will be if their interventions are unsuccessful. There is no way to measure positive outcomes, thus early intervention is unlikely to become popular, especially in goal oriented workplaces. It is far better for individuals to wait until there is an obvious problem and then act to resolve it. The situation is similar to that of the medical profession (doctors get paid when people get sick thus the focus remains on curing disease rather than preventing it) or that of acting to ameliorate environmental problems such as the greenhouse effect. Paradoxically,

chaos predicts the necessity to act early, but it also highlights the very unpredictability which makes it inexpedient to act early.

2.2.7 SECTION SUMMARY

Conflict is a product of both structure and agency. Beginning with a competitive situation, conflict becomes manifest only when the actors in that situation decide they are in conflict. Conflict moves from a latent stage to a manifest stage when individuals realise their disadvantage or potential disadvantage and act to correct the imbalance that they feel. Therefore, without understanding both the setting and the individuals in that setting, research will remain incomplete.

Logically, the ideal time to intervene in recreational conflict is *before* groups begin trying to exclude each other from the recreation setting. To some extent, planning approaches such as the recreation opportunity spectrum (ROS) have developed as a result of this kind of problem (explained in Driver, Brown, Stankey and Gregoire, 1987). However in today's world, early interventions are unlikely to occur, even if our understanding of conflict improves.

So far, this review has discussed general approaches to conflict analysis, however further clarification is required to distinguish competition and conflict. At this stage, it appears that recreational conflict is either measured by the intensity of resulting political lobbying, or by measures of dissatisfaction, which is inadequate as it does not distinguish between competition and conflict. In recreation research, conflict is often compared with crowding (Cessford, 1987), however, intuitively there is a difference between the two. To understand this difference adequately, the influence of the leisure setting becomes important. The following section explores current understandings of recreation and the recreation setting so that they can be incorporated into the general understandings of conflict in other settings.

2.3 PERSPECTIVES ON LEISURE

Earlier approaches to outdoor recreation management saw recreation as participation in an activity during leisure time (Driver and Tocher, 1970). Driver and Tocher extended this framework, arguing that people participate in activities in particular places in order to achieve desired experiences, such as finding solitude, forming closer social bonds or learning new skills. Management emphasis has shifted, from providing settings for activities, towards assessing the potential of a given resource for providing particular, desired experiences. Recreation is a way to achieve desired psychological states, and satisfaction is mediated by the psychological processes of motivation, expectation and interpretation. Thus, subjective experience is an important area of study in recreation research (Scott and Godbey, 1990; Henderson, 1990).

2.3.1 PERCEIVED FREEDOM

Perceived freedom is an important part of these experiences, whether it be freedom *from* work, civilisation or social roles; or freedom *to* participate in activities in appropriate settings within chosen social groups (Cushman, Moore and Simmons, 1994). Perceived freedom is one of the four factors that Csikszentmihalyi (1988) considers comprise the *flow* experience that occurs across a range of recreation settings.

2.3.2 FLOW

Csikszentmihalyi asserts that flow occurs when the individual experiences:

- * freedom of choice in participation;
- * deep or focused concentration;
- * a balance of challenge and skill that can be measured by clear goals and unambiguous feedback; and
- * perceived control.

... People who enjoy what they are doing enter a state of "flow": they concentrate their attention on a limited stimulus field, forget personal problems, lose their sense of time and of themselves, feel competent and in control and have a sense of harmony and union with their surroundings . . . (Csikszentmihalyi, 1985:181).

2.3.2.1 Control

In my view, the two most important factors in the experience of flow are perceived freedom and a sense of control. The other two factors are ways to achieve freedom and control. By concentrating on a small part of the world, individuals essentially free themselves from the pressures of everyday life, experience a sense of freedom and increase their own sense of control. This sense of control is enhanced by an appropriate balance of challenge and skill and is measured by the feedback that the setting provides. Too much challenge and the individual feels incompetent and out of control, whereas with too little challenge, the individual begins to lose concentration and feel bored. Of the two extremes, the former appears to be the most difficult to accommodate. Some individuals can find challenge in controlling the potential boredom of a situation (Langer, 1991; Csikszentmihalyi, 1985).

Scherl (1989) considers that one of the main factors in the wilderness experience is perceived control. She divides control up into *primary control* or control over the external situation, and *secondary control* or control over one's internal reaction to the situation. It is this last form of control, *self-control*, that is the most important aspect of the wilderness experience (Scherl, 1989).

Individuals cannot control nature, but they can control their actions and reactions to the challenges that interaction with wilderness offers. Therefore control is closely linked to challenge - whether that challenge be external (the ability to control objects) or internal (the ability to control self in the face of unchangeable adversity). In both cases, individuals must find challenges that suit their skills, previous experiences, motivations and expectations.

This idea of secondary control can be extended to incorporate the social conditions found in a recreation setting. When faced with adverse social conditions in a recreation setting

individuals could adapt using some form of secondary control to gain maximum benefit or satisfaction from the situation. This appears to be the case when recreationists are faced with crowded settings.

2.3.3 RESPONSE TO CROWDING

Crowding is a negative evaluation of population density and therefore is a subjective assessment of the physical and social setting in which it occurs. Crowding and conflict have many commonalities (Cessford, 1987; Owens, 1985; Gramann and Burdge, 1981). Both crowding and conflict leave recreationists dissatisfied with their recreational experience (Jackson, 1989). Cessford (1987) suggests that crowding could most usefully be seen as a form of recreational conflict, however not all writers agree with this assertion. Nonetheless, research into perceived crowding is useful for gaining insights into recreational conflict (Manning, 1986; Owens, 1985).

2.3.3.1 Motivations

Recreationists' evaluations of a recreation setting are influenced by their motivations for participation, their expectations of the experience and, to a lesser extent, by their preferred setting conditions (Manning, 1986; Cessford, 1987). Recreationists who recreate to find solitude or to *exit civilisation* are more likely to perceive crowding than those who are out to meet people (Sutton, 1992; Cessford, 1987; Absher and Lee, 1981; Schreyer and Roggenbuck, 1978). The crowd prevents recreationists looking for solitude from finding it. This goal interference is similar to what occurs in conflict situations. Snowmobilers, for example, prevent cross country skiers from finding peace and quiet (Butler, 1982), thus the actions of one group directly interfere with the desired goals of another, leaving the latter feeling dissatisfied (Jackson, 1989).

2.3.3.2 Expectations

A recreationist is most likely to evaluate a situation negatively if the conditions are worse than they expected. Expectations come from previous experience in the area, or from information the individual has received from other people. Individuals whose

experiences match or better their expectations are more likely to be satisfied than individuals who meet more people than they expect in the same setting (Ditton, Fedler and Graefe, 1983; Manning, 1986). Similarly, Ivy, Stewart and Lue (1992) found that perceived conflict in a recreational setting was less when individuals had fewer encounters with the disliked group than they expected. Therefore expectations influence recreational conflict.

2.3.3.3 Preferences

Recreationists' preferences are less predictive of satisfaction than their prior expectations of the setting or their motivations for entering it in the first place (Shelby, Heberlein, Vaske and Alfano, 1983, Ditton *et al.*, 1983). Barker (1989) found that specialised trampers participate in a range of settings that do not necessarily have their preferred setting attributes. Individuals may prefer not to meet anyone in a setting, but if they expect to meet others they adjust their motivations to better suit the situation, for example trampers who prefer to visit remote locations also enjoy visiting popular tramping areas when accompanying friends with different preferences or experience (Barker, 1989). Consequently, they will feel satisfied with their recreational experience.

2.3.4 EXPECTATIONS, MOTIVATIONS, CONTROL AND FREEDOM

When individuals' expectations are met or surpassed, they will feel more in control of the situation. In my view, this concept is similar to Scherl's (1989) *secondary control*. With accurate expectations, people appear to adjust their motivations and goals to suit the conditions found in a known setting. Additionally, they are free to adjust (or not) and to participate (or not) in that setting. Conversely, once in an unexpectedly, undesirable situation, people have little freedom to choose to change either their motivations or the setting. Thus perception of freedom of choice (however constrained it might appear from the outside) also impacts on the experience of recreationists.

2.3.5 SECTION SUMMARY

An individual's psychological processes strongly influence the satisfaction that they gain from participating in outdoor recreation. Recreation is goal-directed behaviour and satisfaction in recreation settings is contingent on fulfilment of specific goals. With accurate information about setting conditions, individuals can adjust their goals to maximise their own satisfaction even where a setting does not provide their preferred conditions. However, it seems reasonable to assume that there is a limit to the adaptations that recreationists are willing or able to make.

2.4 CONFLICT IN RECREATIONAL SETTINGS

Conflict has been documented between many different recreational groups including motorcraft users and canoeists (Shelby, 1980; Adelman *et al.*, 1982), canoeists and fishers (Driver and Bassett, 1975), snowmobilers and cross country skiers (Knopp and Tyger, 1973; Jackson and Wong, 1982) water skiers and fishers (Gramann and Burdge, 1981) trailbikers and walkers (Dunn, 1970), horseback riders and walkers (Vollbon, 1990) as well as between mountain-bikers and walkers (Baker 1990, Watson, Williams and Daigle, 1991; Coughlin, 1994). The difficulty is that the reasons for each different conflict situation vary with the setting. The findings from one setting do not necessarily illuminate the reasons for conflict in another setting. Owens (1985) suggests this is because there is not enough research into the social psychological aspects of conflict in these settings.

2.4.1 INCREASING CONFLICT IN RECREATION

Recreation itself is changing, both in meaning and form (Schreyer, 1990; Kelly, 1990; 1991; Wearing and Wearing, 1992). Recreation can become a central life interest for some individuals. Where individuals once identified themselves by the work they did, some now develop self identity through their participation in recreational activities (Haggard and Williams, 1991; Jacob and Schreyer, 1980; Bryan, 1979). Technology is changing recreation. The commercialisation of leisure and the advertising media expose

people to many potential leisure activities (Wearing and Wearing, 1992; Goodale and Godbey, 1988; Rojek, 1985). In outdoor recreation, new technologies such as windsurfers, jet-skis, snowmobiles, hang-gliders, parapents and mountain-bikes have increased the possible uses of outdoor areas, while technological developments have increased participation in traditional activities. Aids for alpine climbing, the development of lightweight tents and sleeping bags, improvements in pack design, and the development of specialised fishing technology, kayaking equipment, or even outdoor clothing have changed traditional outdoor activities. These changes influence the situation, which, in turn, may set the scene for conflict to develop.

2.4.2 SITUATIONAL FACTORS IN RECREATIONAL CONFLICT

Social and physical settings are important factors in recreational conflict. For example, conflict is unlikely to develop if there are no contacts between members of different recreational groups and/ or an abundance of resources available for use. Much research into recreational conflict has examined competition for space (Owens, 1985; Hammitt, 1988). Bury, Holland and McEwen (1983) suggest conflict is dominated by three characteristics: the spatial or temporal proximity of two different activities, their degree of environmental dominance and the extent of their dependence on technological products. Environmental dominance is described as the desire to *conquer* the environment or to master challenges there. However, Bury *et al.* suggest that it is not necessary to look at the motives of individuals. Instead they advocate that managers should rank the impact the activity has on the environment. Dependence on technology is based on the mechanisation of the activity. Motor bikers will therefore have a higher dependence on technology than hikers. Because conflict is unlikely to occur unless two activities are in close proximity, the compatibility of different activities can be estimated by aligning them on a grid with one axis measuring high to low dominance over the environment dominance and the other measuring high to low dependence on technology. Figure 2 shows the model presented by Bury *et al.* (1983).

Dominance over Environment	High	Strenuous tramping	Orienteering	Mountain climbing, Downhill skiing			Cross country ORV - motorcycle scramble	
			Cross-country skiing	Rapids running	Sailboat racing	Hang gliding	Snow-mobiling Scuba diving	
			Bow and Arrow Hunting	Fishing	Rifle hunting		Water skiing	
			Canoe touring	Sailboat cruising	Tent camping with small motorcycle	Campervan camping with small motorcycle		
			Walking, Rock-hounding	Backcountry camping & hiking	Campground tent camping	Bicycle touring	Campervan camping	
			Nature study		Nature photography		Driving for pleasure	Amateur astronomy
	low	Dependence on Technology					High	

Figure 2: Conceptual Model of Recreational Conflict (adapted from Bury *et al.* 1983:403).

Devall and Harry (1981:399) hypothesise that;

... social relationships in outdoor recreation settings are heavily influenced by the recreational technologies; that recreationists participate in clusters of technologically similar recreations; that users of more physically obtrusive technologies are resented by users of less obtrusive technologies, but that the latter are not resented by the former.

This framework is useful for managers, and is well supported by field observations.

Skiers dislike snowmobilers, and canoeists dislike motorboaters, more than *vice versa* (for example, Butler, 1982; Adelman *et al.*, 1982). One would predict, therefore, that walkers are more likely to dislike meeting bikers than the other way around, which is the case (Watson *et al.*, 1991).

2.4.3 CRITICISMS OF PAST RESEARCH

The approaches of Bury *et al.* (1983), and Devall and Harry provide simple frameworks for predicting when changes in recreational settings are likely to develop into conflict.

These explanations focus directly on situational factors without looking at the interpretations and perceptions of the recreationists concerned. They do not explain why

recreationists might be tolerant of others in one situation, but intolerant in others. For example, public roads are places where people drive cars, ride bikes and walk (to name a few), and yet conflict, although present, does not escalate there. Neither do they provide reliable methods for prediction, mainly because the frameworks require managers to estimate the technological dependence or the impact of activities. For activities that are very different, these are useful scales, however there could be some argument over the ranking of some of the activities in Figure 2. For example, fishers may not agree that they are more dependent on technology than canoeists and participants in strenuous hiking may not agree that they are out to dominate the environment.

Additionally, there is no explanation of conflict between groups such as fishers and canoeists, who are close on the continuum of dependence on technology. Hammitt (1988) and Owens (1985) attribute this deficiency to an imperfect understanding of the social-psychological processes involved. Researchers have not established a causal link between dependence on technology and conflict, so research findings in one setting cannot be generalised to another. For example, research on snowmobilers and cross-country skiers is of limited value in understanding conflict between fishers and canoeists (Owens, 1985). Problems of noise and speed that are important factors in the case of snowmobilers and cross-country skiers (Butler, 1982; 1974), are obviously not major factors in the case of fishers and canoeists.

2.4.4 SECTION SUMMARY

Much research into recreational conflict has focused on objective situational factors because these are perceived to be aspects of conflict that are within the ambit of management. Managers are required to provide settings in which recreationists achieve desired experiences (Stankey and Wood, 1982; Driver, Brown, Stankey and Gregoire, 1987). While an understanding of the recreation experience is considered useful for recreation planning, it appears that in much conflict research, researchers have ignored the role of actors' experiences. This focus resulted from a *solution finding* approach

(Hammit, 1988; Owens, 1985). Jacob and Schreyer (1980) have remedied this problem, by offering a theoretical perspective specifically for conflict in recreation.

2.5 CONFLICT AS GOAL INTERFERENCE

Jacob and Schreyer (1980) define recreational conflict simply as;

goal interference attributed to another's behaviour,

which fits well with findings earlier in this chapter, that recreation is goal directed behaviour. Thus, recreational conflict develops when groups with incompatible goals come into contact. This explanation of conflict is useful in understanding how canoeists, wanting to meet and talk to people, might prevent fishers from satisfying their recreational goals of finding peace and quiet, and spending time alone (Driver and Basset, 1975). Similarly, horseback riders can impinge on the wilderness experience of bush-walkers (Vollbon, 1990; Cubit, 1990).

Jacob and Schreyer (1980) expand on this basic concept suggesting that recreational conflict is affected by four factors: activity style; environmental relation; mode of experience; and lifestyle diversity.

2.5.1 ACTIVITY STYLE

Activities have different meanings for different people and individuals can feel that certain behaviours are unsuitable in a particular activity. For example, some trampers feel that it is inappropriate to tramp with large, noisy groups, so meeting with such groups may anger an individual with those beliefs. Bryan (1979) proposes the term *specialisation* to explain the way individuals change their activity style as their experience increases.

2.5.1.1 Specialisation Theory

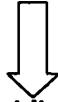
Bryan (1977) suggests that differences in experience and commitment to a recreational activity can cause conflict. He developed this idea from looking at the change in fishing

Low Specialisation

Day Hikers, Overnighters, Weekenders



On trail hikers, backpackers



Off trail distance hikers, backpackers

High specialisation

Figure 3: Trampler/ Hiker Specialisation (From Bryan, 1979:66)

style that trout fishers noted throughout the length of their participation. Bryan found that fishers move from being *occasional* fishers through *generalists*; *technique specialists* to *technique-setting* specialists. The more specialised an individual, the more specific their requirements for a high quality recreational experience. Thus, a specialised fly fisher will be looking for more specific environmental conditions than a more *generalised* fisher. Bryan (1979) then extends this idea to activities such as photography, bird watching and tramping. Specialised trampers go on longer trips, explore wild areas off the beaten track and seek solitude. Bryan's (1979:66) suggested progression from novice through to specialist for tramping is given in Figure 3.

Individual identification with the chosen activity increases with specialisation, thus, individuals can gain status from their specialist activity. Jacob and Schreyer (1980) call this the intensity of activity style and note that mass participation threatens personal identification, by decreasing the value of the experience. If other participants behave inappropriately or show that they do not recognise this status, the individual can feel

their identity and status are threatened. Thus, if the activity is a central life interest, conflict is more likely to develop.

2.5.2 ENVIRONMENTAL RELATION

When human beings interact with places, they become emotionally or personally attached to them. Individuals can feel they belong to a place, or they might feel they have inside knowledge of that place. This detailed knowledge may result in the desire to have a say in how the area is to be managed (Schreyer, 1990). A detailed knowledge of an area may also give it an identity of its own, thus the place itself is seen to deserve respect. Recreationists who behave inappropriately are seen to lack respect for the *specialness* of the place in question.

2.5.2.1 Sense of Place

In many respects, this idea underlies much of the literature on sense of place. Perkins (1988:62) writes;

Space and landscape features are considered to become meaningful and made into places as a result of individual human activity associated with them.

A space, therefore, becomes a place interpreted by individuals, according to their past experience, both of the space and of the interpretations of the social group with which they share the space. In this way, people build up their expectations of the types of behaviour that occur in different places. Also, a place can mean different things to different groups who, for example, use the same space at different times of the day, week or year. Consider a community centre which is the venue for a market place on Saturday mornings; for bowls on Saturday night; for a social gathering of local women on Wednesday mornings; and for badminton on Thursday nights. Each group sees the community centre differently, and some individuals attach more than one meaning to the place, depending on their knowledge of the different activities that go on there.

The same place has many different, socially constructed meanings, all of which are behaviour settings. Conflict is likely to occur if the bowling group try to shift their

activities to a Thursday night when the badminton group are expecting to use the centre. The rules of the Thursday night behaviour setting will have broken down. In comparison, conflict between the users of the public road, mentioned earlier, does not escalate because they expect to meet each other there and to share that setting with other groups. In this situation, a range of road users is entirely appropriate, mainly because individuals have similar perceptions about the public road behaviour setting. If a group of walkers decided to walk down the middle of the road without moving aside for passing cars or bikes, however, it is very likely that conflict would develop.

2.5.2.2 Place Attachment

The meaning of place is bound up in more than just behaviour. In many outdoor recreation settings people can develop strong emotional attachment to places and inappropriate behaviour may be seen as disrespect or disregard for the value of the place (Williams, Patterson, Roggenbuck and Watson, 1992). People, who have spent much time in a place, develop these attachments more strongly than those who visit infrequently. Moore and Graefe (1994) found two aspects in place attachment - *place dependence* and *place identity*. The first aspect centres on the activity and is largely functional in nature, while the second is more affective and seems to take longer to emerge. Thus, affective place identity requires experience in the place to develop (Moore and Graefe, 1994).

Eyles (1985) and Sutton (1992) discuss the different senses of place that individuals exhibit. Sense of place is *derived from the totality of an individual's life* (Eyles, 1985:2) and includes aspects of many different senses of place. Sutton, in his study of Kapiti Island, found that people see the island in many different ways, for example historical, ecological, conservation, activity, neighbourhood, regional, cultural and legendary senses of place. Additionally these components may contribute to an individual's overall sense of place.

Relationships with the environment are closely linked with activity style (Bryan, 1979). A person's sense of what is an appropriate way to participate in an activity, and what is appropriate behaviour in a particular place, will overlap because outdoor recreation depends heavily on the setting in which it occurs.

2.5.2.3 Behaviour Settings

Owens (1985) considers that conflict results when the rules of a behaviour setting break down. Behaviour settings are defined and limited by expected and accepted behaviours that give social meaning to a setting. A teenager behaves differently at home with her family than when out with friends at a party. Behaviours, that are normal in one setting, may not be acceptable or appropriate in another. Consider the rock climber, admired when climbing on a climbing wall but arrested for climbing on a public building.

2.5.2.4 Scripts

The behaviour setting concept is similar to the social psychological concept of a script. According to Worchel *et al.*(1991:52);

a script is our knowledge of a particular situation and the way events in that situation unfold.

Pryor and Ostrom (1987:149) define a script as a schematic structure where *schemata determine what a perceiver will attend to (sic) and deem important in social experience and what he/she will ignore and deem irrelevant.* If a script is not followed in a recreation setting, and the deviation cannot be ignored, then there will be a loss of equilibrium and, possibly, the development of conflict. Scripts are a form of expectation, so they are important in determining the satisfaction recreationists get from participation in their chosen activity.

2.5.2.5 Schemes of Order

Lee (1972) uses the term *scheme of order* to describe a similar thing. Each culture or subculture has its own scheme of order associated with outdoor spaces. These prescribe

acceptable behaviour and control unacceptable behaviour, making the place comfortable for members of the group that share it. Lee (1972:82) suggests that;

. . . individuals seek outdoor areas where they may share a scheme of order with others similar enough to themselves to be able to take for granted many everyday normative constraints.

These normative constraints remain at a very low level of awareness during leisure behaviour, which creates a high level of psychological comfort or relaxation. In comparison, unfamiliar places for which individuals have no scheme of order tend to engender fear and discomfort (*ibid.*).

2.5.2.6 Familiarity

That individuals go into outdoor leisure settings with the specific aim of escaping from the pressures in everyday city life (which at the present time are perceived to include large and rapid changes), indicates that recreationists are looking for some level of constancy or familiarity. The idea of *back to nature* implies a return to something that is familiar and relatively unchanging and, in some measure, comfortable. Similarly, settings that fulfil expectations are more comfortable than those in which individuals find unexpected, and undesired conditions.

When an individual is faced with a breakdown in a behaviour setting, or script, they act to restore equilibrium through a number of coping behaviours (Owens, 1985). In recreation, one commonly used coping strategy is to change the setting in which one recreates either spatially or temporally (Schreyer, 1990; Manning, 1986; Anderson and Brown, 1984). These coping strategies are the basis of the *further up the valley syndrome* outlined in the introduction (Devlin and O'Connor, 1988). Owens (1985) suggests that recreational conflict arises when the initial coping behaviours either do not restore equilibrium, or are not available, as would be the case when a resource is scarce.

2.5.3 MODE OF EXPERIENCE

Recreationists interact with the environment in different ways. Jacob and Schreyer (1980) distinguish between a *setting focus* and an *activity focus*. People with a setting focus notice the small things in the setting, for example, the plants the birds and the smells. In comparison, someone with an activity focus experiences the environment as a backdrop for their activity.

There are some obvious links with place dependence and place identity here. People with an activity focus are more likely to be place dependent where people with a setting focus are likely to identify emotionally with the place. Jacob and Schreyer (1980) predict that those with an activity focus are more likely to be disruptive of those with a setting focus. People with a setting focus are also more likely to notice evidence of inappropriate behaviour and have strong feelings about conservation, particularly in the recreation setting.

Ruddell and Gramann (1994) extend this idea further, suggesting that some recreational goals may be more vulnerable to interference from the behaviour of other recreationists. People looking for peace and quiet may be more easily thwarted in their attempts to find it than those looking for a chance to meet others. If groups of recreationists have different sets of goals, it seems likely that some groups are more likely to be vulnerable to goal interference, and hence conflict, than others. This idea then could be used in conjunction with the ideas of Bury *et al.* (1983). Groups that are less dependent on technology may have recreational goals that are more vulnerable to interference than those who are more dependent on technology.

2.5.4 TOLERANCE OF LIFESTYLE DIVERSITY

The values, behaviour or even presence of another subgroup may be seen as inappropriate in a recreation setting (Jacob and Schreyer, 1980), thus recreational conflict is greater where there is less tolerance of user groups different from one's own. Ivy,

Stewart and Lue (1992) found that an individual's willingness to share a resource with other groups helped explain variation in conflict perception. Expectations are seen to have an important role in increasing recreationists' tolerances for other user groups.

However, it is difficult to say whether the degree of an individual's tolerance is a cause or an effect of past experience in meeting other, specific user groups. Tolerance might decrease, for example, when people persistently come in contact with a particular group that negatively affect their recreational experiences. Thus, when biker numbers were low, it was no problem to trampers, and may even have been seen as a novelty, but as numbers increase, trampers found them more of an intrusion. Additionally, the degree of control the individual feels, may also affect their tolerance of another group. People who feel able to access high quality opportunities, for example, moving to a new area, or participating at a different time, may be more able to tolerate another (disruptive) user group, than those who feel that they have lost access to all high quality experiences.

2.5.5 COMPARING CONFLICT WITH CROWDING

Defining conflict as *goal interference attributed to the actions of another*, does not differentiate it from crowding. To Owens (1985), crowding is a short-lived experience that disappears when the recreationist leaves the crowded setting. In comparison;

Conflict 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 psychological equilibrium (p.252).

Attitudes are relatively enduring psychological states that predispose individuals to respond favourably or unfavourably towards attitude objects (Oskamp, 1977:8-9). Thus recreational conflict results in the development of negative attitudes towards individuals or groups who are interfering with one's recreational goals.

It is difficult to develop negative attitudes towards people perceived to be the same as oneself. When individuals have items of information (for example, items about opinions,

feelings, behaviour or knowledge) that do not fit together, they will change some of it to make it better fit together (Festinger, 1962). Maintaining negative attitudes about people similar to self would cause dissonance or discomfort, requiring the individual either to change the negative attitude, or to find ways to differentiate between self and the attitude object.

2.5.6 PERCEPTIONS OF DIFFERENCE

Crowding is more likely to become conflict if individuals can categorise people within the crowd into an in-group and an out-group. Therefore, individuals in small groups feel *crowded* if in the company of other small groups, whereas conflict develops if a small group has to share a resource with a large group (Cessford, 1987; Owens, 1985; Manning, 1986). Categorisation involves maximising between-group differences and minimising in-group differences (Pryor and Ostrom, 1987). Thus, conflict can be accompanied by an increased group solidarity amongst those who are negatively affected (Worchel *et al.*, 1991; Ross and Nisbett, 1991; Tillet, 1991). Once this situation develops, it is more difficult to resolve conflict, as each group will interpret the other's behaviour in ways that reinforce their perception of the situation (Ross and Nisbett, 1991). Additionally, it is only a small step from categorisation to negative stereotyping and the development of prejudice (Allport, 1954 cited in Pryor and Ostrom, 1987). Once others have been categorised, tolerance will become more important as an influence in perceived conflict.

2.5.7 THE GALTUNG TRIANGLE

Galtung (1971, cited in Bercovitch 1984) argues that conflict is an intermingling of three similar factors: situational factors; attitudes and perceptions; and behaviour all affect each other. This set of relationships is represented in the Galtung Triangle shown in Figure 4.

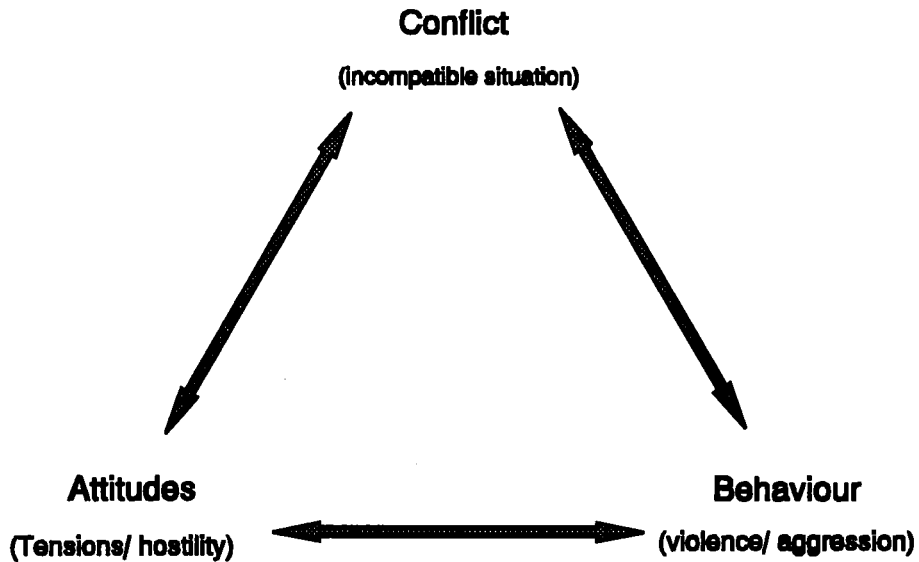


Figure 4: The Galtung Triangle (In Bercovitch, 1984:6).

Situational factors include physical proximity, scarce resources and the social norms or expectations associated with a setting. Attitudes and perceptions are social psychological factors associated with the individual's assessment of the situation in the light of their expectations and motivations. Behaviour is the action that is taken as a result of conflict developing. Perhaps the most important outcome of using the Galtung Triangle as a framework is the understanding that the behaviour of actors in the situation further affects the development of attitudinal and situational factors, which then cause a further change in behaviour. Once aggressive behaviour occurs, the situation changes and the attitudes of the actors are likely to become more strongly negative towards their opponents. Therefore, the escalation of conflict is likely to proceed at an ever increasing rate. If, however, there is little or no aggressive behaviour the conflict will escalate slowly, and be more amenable to mediation by a third party.

The effect of behaviour on the escalation of conflict in a recreational setting is illustrated by the case of snowmobilers and cross-country skiers. In this situation the conflict was

originally asymmetrical. Snowmobilers were not as offended by skiers as skiers were by snowmobilers. However, snowmobilers became threatened by the other group once skiers began lobbying to exclude snowmobilers from certain areas (Jackson and Wong, 1982). One could predict that once snowmobilers began to fight back, skiers would be likely to step up their efforts to get them excluded.

This kind of activity presupposes that such behaviour will have an effect on decision makers. Individuals expect that they will achieve desired outcomes through their political lobbying. In the public road setting mentioned earlier, there is much conflict. Comments amongst cyclists, for example, indicate that they dislike sharing roads with cars and trucks, and many car drivers have expressed their impatience with cyclists. The difference, in this setting is that the political decisions have been in place for many years. Roads are *traditionally* for all users, and therefore user groups are very unlikely to be able to influence authorities to exclude others.

People's expectations of what they will find in a setting, their beliefs about what others think is acceptable in that setting, and their estimated likelihood of success in excluding others, all influence the escalation of conflict. These factors are similar to those that social-psychologists suggest influence individuals' behaviours in relation to their attitudes (Ajzen, 1991; Ajzen and Driver, 1992). According to Ajzen (1991) and Ross and Nisbett (1991), individuals' attitudes are not generally good predictors of behaviour. However, by looking at situational factors such as the individual's expectation of achieving desired outcomes, the importance of those outcomes, and their interpretation of how they are expected to behave in that situation, behaviour becomes much more predictable.

2.5.8 SECTION SUMMARY

Conflict occurs when individuals form negative attitudes towards those who are interfering with their recreational goals. It escalates (and, therefore, is of more concern) according to the action taken by the individuals involved. A key question in ascertaining

whether conflict exists is, therefore, to look at the perceptions of difference that each group has in regard to the other, and to look at whether the attitudes towards the different groups are negative, positive or neutral.

2.6 CONFLICT BETWEEN BIKERS AND WALKERS

Given the understandings of conflict outlined above, it appears that there is a well developed conflict between mountain-bikers and trampers. The mountain-biker - walker conflict is influenced by situational factors such as the increase in the popularity of mountain-biking over the last few years, by negative attitudes and perceptions of difference between the groups and by the exclusive behaviour of walkers at a political level. It appears that walkers, in particular feel that their recreational experiences are diminished by meeting mountain-bikers, hence one might assume that meeting bikers interferes with their recreational goals.

2.6.1 OFF-ROAD BIKING FIGURES

Mountain-biker numbers have increased markedly over recent years in the United States, United Kingdom, Switzerland, Australia, Canada as well as in New Zealand (Chavez, Winter and Baas, 1993; Fyffe, 1992; Hillary Commission, 1992; Schweizer Tourismus-Verband, 1991). Coughlin (1994) quotes Van Horn of the Bicycle Industry Association of New Zealand, as estimating that 80 to 85 percent of the total number of bicycles imported into New Zealand as being mountain or hybrid bikes. The Hillary Commission (1992) states that estimates from retailers indicate that about 80 per cent of bike sales are mountain-bikes. Other sources from the industry that I questioned, considered that mountain-bike sales amounted to about 60 per cent of the market.

2.6.1.1 Limitations of Biking Figures

There are difficulties in collecting figures this way. First, according to the retailers I approached, the industry does not keep figures on the different segments of the bicycle market and second, there are difficulties in defining exactly what a *mountain-bike* is.

Not all fat tyre bikes have off-road capability, and indeed many retailers are now stressing this fact when they sell bikes. To the untrained eye, a bike may look like a mountain-bike, but it is not - it has been built for road use only. Whether road-only bikes are included in the figures or not will affect the estimates of mountain-bike sales and further, how many mountain-bikes are taken off-road.

Estimates of the number of bike owners who ride off-road vary widely. Keller (1990:2) notes that [in the United States];

Many, and perhaps, the majority, of mountain-bike owners do their riding on paved streets and seldom ride off-road in public areas.

Chavez *et al.* (1993) maintain that about 30 per cent of U.S. mountain-bike owners go off-road, although their source may not be entirely reliable. Coughlin (1994:8), as a New Zealand comparison, writes that;

it is generally believed that 80 to 90 percent of . . . [mountain] bikes are never actually used off-road.

However, he does not clarify his source. Three New Zealand retailers estimated that the percentage of bikers going off-road is likely to be higher here than in the United States. Their accompanying comments indicated that they only included bikes *with* off-road capability in their estimates.

Furthermore, *off-road* also means different things to different people. Keller (1990) for example considers that off-road includes *any trail, old road bed or other unpaved lane*, where Coughlin (1994) and Chavez *et al.* (1993) make no attempt to define the term.

2.6.1.2 Estimates of Off-Road Biking in New Zealand

Notwithstanding these problems, it appears that a higher proportion of mountain-bike owners take their bikes off-road in New Zealand than they do in the United States. This difference may be attributed to the relative availability of suitable places for off-road riding in New Zealand. Few people in New Zealand are more than one to two hours drive from a place to bike. Similarly, with the exception of Auckland, our major cities

are well served with peri-urban tracks, firebreaks and roads (Kennett, Kennett and Kennett, 1993)

Overall, mountain-bike sales have increased over the last 10 years in New Zealand, as has off-road riding, thus more recreation opportunities are needed in areas with easy tracks and good access, for example, peri-urban areas. Not only are biker numbers rising, but it appears that participation in walking has also increased in these areas (Sigglekow, 1992, Pers. Comm., Devlin, 1994, Pers. Comm.). The situational factors of increased competition for resources, an increased likelihood of encountering different users, as well as a difference between the groups in the level of technology in use, will all contribute to a conflict situation (Devall and Harry, 1981; Bury *et al.*, 1983). Watson *et al.* (1991) document the existence of the predicted asymmetrical conflict situation. Not only did walkers more often mention that they disliked meeting bikers, walkers perceived more differences between the groups than bikers. In comparison, bikers were more accurate in their assessment of similarity between the two groups.

2.6.2 ATTITUDES AND PERCEPTIONS

Some walkers feel that mountain-bikers are a different type of person from themselves (Coello, 1989; Kita, 1986). Kita quotes one walker as saying;

I'm a hiker and I've seen mountain-bikes in the back country. I see what they're doing and how they're being ridden. The groups I've seen are not lovely little families like some people would have us believe, but rather macho young men out for a thrill and a workout (p. 69).

Many walkers feel that mountain-biking is not an appropriate activity in the backcountry. Environmental damage is one of the most often mentioned factors in this whole debate. Walkers feel that mountain-bikers increase the damage on tracks while mountain-bikers argue vehemently that there is no scientific evidence to prove this assertion true (McKerrow, 1989). Research on this subject has proved to be inconclusive. Chavez *et al.* (1993) quote Seney (1990) whose masters research concluded that the track damage

caused by mountain-bikes was not significant, whereas Hain (1986, cited in Chavez *et al.*) found that bikes did damage trails.

Bikers feel that walkers are judging them unfairly. Many articles also refer to the *occasional outlaw*, who uses a mountain-bike destructively or irresponsibly (Feldman, 1988; Coello, 1989; Dieterich, undated, c.1992; Kita, 1986; Sprung, 1990; Getting Into Gear, 1990; Hillary Commission, 1992) and has ruined other bikers' opportunities. Walkers' attitudes toward bikers are blamed on cycle industry advertising. Dieterich (Undated, c.1992), for example, notes that;

. . . the industry itself adds to the mechanical monster mystique by depicting kamikaze images in their advertisements.

She adds that negative attitudes towards mountain-bikers are the result of bad public relations. The answer to this problem is given as education and activism (Blumenthal, 1990).

Many bikers admit that mountain-bikes do cause damage, however they argue that other users also damage tracks (Dieterich, undated, c.1992). Other writers argue that the issue is not impact at all, the issue is user compatibility (Feldman, 1988). Sidaway and Thompson (1991) support this view. They feel that conflict is not the result of the evident damage that mountain-bikers do, but instead walkers believe that such damage reflects behaviour that is inconsistent with traditional values, such as enjoying the peace and quiet of the backcountry.

The popular literature indicates that walkers feel that their space is being invaded, and that the experiences of solitude, tranquillity and escape are threatened if mountain-bikes are going to use tracks (Coello, 1989). Therefore, bikers are in a position of some power. One renegade mountain-biker can diminish the experience of many walkers, however, it is unclear whether walkers diminish the experience of bikers.

2.6.3 THE POLITICAL ARENA

In the political arena, however, walkers have been successful in getting bikes banned from a large number of areas (Baker, 1990; Kita, 1986; Dieterich, undated) and many walkers are lobbying, both in New Zealand and overseas, to get bikers excluded from some of the tracks that they currently use (Turner, 1992, Pers. Comm.; The Press, 20/7/92; Coello, 1989; Feldman, 1988; Meyer, 1985; Kita, 1986). Because walkers are established users of the outdoors, and are well organised into clubs and associations, they have been able to exert political pressure. In comparison, it appears that mountain-bikers have been relatively disorganised and, therefore, have been at a considerable disadvantage politically. Certainly it has taken some time for bikers to begin to lobby to gain back some access (Baker, 1990).

2.6.4 SECTION SUMMARY

Mountain-biking results from a new form of recreational technology which has changed the way many people are choosing to use outdoor recreation resources. Accurate estimates of the actual numbers of people that are riding bikes off-road are very difficult to find although it appears that, in New Zealand, off road riding is far more common than it is in the United States. This new activity is affecting the recreational experiences of walkers and trampers, and they, in turn, have chosen to lobby the authorities to get mountain-bikers excluded from many outdoor areas.

2.7 CHAPTER SUMMARY

Conflict is a complex, social interaction process affected by many different factors including those in the social and physical situation, the attitudes and perceptions, and the behaviour of the individuals involved. Thus to understand conflict, the researcher must look at all of these factors. Conflict that occurs specifically in recreational settings will be better understood by exploring the role of recreationists' perceptions and attitudes. Recreation is goal directed behaviour, and recreationists have specific motivations for, and expectations of, the experiences that result from their chosen activity and their

chosen setting. Conflict in recreation is seen as goal interference and is mediated by individuals' levels of specialisation, their motivations and expectations of the setting, their mode of experience, their activity style, their place attachment and their tolerance for meeting different user groups. Each of these factors both influences, and is influenced by the other, requiring a researcher to take a broad view of the whole process.

It appears, from a review of mostly popular literature, that there is conflict between mountain-bikers and trampers in New Zealand, the United States and in European countries. Walkers, in particular, see mountain-bikers as different to themselves and they have begun working to exclude bikers from many areas. So far, however, there is no evidence that bikers and walkers are significantly different in their preferences and values. Ascertaining whether this difference exists in the New Zealand setting is one of the objectives of this study.

There is no data in the recreation literature which describes the mountain-biker group. It is very difficult, therefore, to know if they are different in their preferences, motivations, expectations and demographic profiles than other recreational groups. Differences in these attributes may contribute to the trumper/biker conflict situation especially if they are found to have conflicting recreational goals and to have similar tastes in the kinds of places they like to use. It also seems important to investigate the changing patterns of resource use that mountain-biking has caused, and how they might contribute to the conflict situation.

At this stage, the conflict appears to be asymmetrical in nature, with walkers reflecting annoyance at the presence of bikers, who, in turn, do not seem as concerned by meeting walkers. However, bikers are beginning to react to walkers' attempts to exclude them. A key problem is understanding how the activities of mountain-bikers interfere with the goals, values and aspirations of walkers. It appears that the recreational goals of the two

groups must differ in some way for this situation to exist. The asymmetry of the conflict and the perceived and actual differences between walkers and bikers need confirmation in the New Zealand setting. At the same time causal links are important, that is, why do these differences matter and how do they lead to conflict?

In short, to investigate the current conflict between mountain-bikers and walkers/trampers, this research must address both situational factors and social psychological factors within this setting. A large number of individuals participate in both mountain-biking and tramping, which makes this conflict situation different to most of the others that have been researched. Therefore, this setting may yield some different insights into conflict in recreation than the settings researched in the past.

Chapter 3

METHODOLOGY

3.1 INTRODUCTION

The previous chapter has reviewed the literature on recreational conflicts and the theoretical perspectives which help in their understanding. I argued that the development of recreational conflict is influenced both by environmental factors, such as increasing use, changing use patterns, proximity of incompatible groups, and by social-psychological factors, such as how individuals interpret the situation. These different influences are best explored using a range of methods. This chapter describes and discusses the methods that were used in this research in the light of these epistemological assumptions. The process of analysis is also explained to elaborate the strengths and possible weaknesses of the research process.

3.2 EPISTEMOLOGY AND ONTOLOGY

Recreational conflict has previously been studied from a positivistic perspective using self-administered questionnaires as a primary source of data. Positivists aim to find out about the world using *objective* measurement of direct sensory experience. In a positivist epistemology, truth in the social sciences is *singular and external to the individual* (Henderson, 1990:169). This perspective, however, does not address adequately the role of the researcher in the research process, nor does it acknowledge the cultural context in

which research is carried out (Berno, 1995). Knowledge is a human construction, thus it changes, changing our view of the world in the process. Our theories about how the world works, not only come out of the observations that we make and the experiences that we have, they also influence *what* we see and how we experience an event.

Language and culture are also collections of symbols or theories that shape our interpretation of the world. We name things that have meaning for us. That there are words in other languages with no equivalent in English shows differences in the importance of those named objects in different cultures. The English language, like other Germanic languages, separates subjects and objects, which fosters the impression that the world is made up of discrete entities (Pirsig, 1974), thus it is easier for English speakers to see a researcher as separate from the research. It is not surprising, that positivism has been a strong force in our approach to the sciences, and that scientific thought originated in cultures with similar linguistic structures.

3.2.1 A HUMANIST FRAMEWORK

Humanistic approaches broaden the world view of positivism because they account for the role of human perceptions and interpretations. Accepting the role of the researcher in research does not preclude the use of the objective techniques of the natural sciences.

Instead it highlights both the limitations and advantages of an objective science.

Humanism, and more specifically, idealism, permits an appreciation of the way human beings construct a view of the world, which then influences their actions in that world.

It acknowledges different types, or ways, of knowing, thus providing a better framework from which to investigate the world, particularly in the social sciences.

Belenky, Clinchy, Goldberger and Tarule (1986) distinguish a number of different ways of knowing. However, of particular interest in the research context are *separated knowing* and *connected knowing*. Separated knowing is the type of knowing that arises from the use of objective techniques, where the researcher is seen as being separated

from the subjects of study. The researcher imposes her/his own interpretations on the data, thus the separated knowing implies some level of *mastery over* the actors involved.

In comparison, connected knowing, or understanding, implies;

personal acquaintance with an object (usually but not always a person). Understanding involves intimacy and equality between self and object, while knowledge implies separation from the object and mastery over it. Understanding . . . entails acceptance . . . (p.101)

and therefore some accommodation of another person's perspective. Ethically, when one's research involves people, it should be aimed at connected knowing and *understanding* rather than separate knowing and *mastery over* the actors. In the human sciences, those under study are influenced by the same processes of language, culture and interpretation as the researcher. The interpretations of respondents, or the way they construe a situation, will direct their actions (Ross and Nisbett, 1991). A connected approach is, in some respects, *more objective* because the subjects of the study explain their own actions, while in a positivist approach the researcher imposes her/his own meaning on the recorded actions of others (Belenky *et al.*, 1986).

A humanist framework helps us see that no research methods are free of the imperfections and limitations of the human condition. It is very unlikely that we will ever know the *absolute truth*. Such a thing may be just another figment of our language. This does not excuse sloppy research techniques, however, it does allow us to look at research from a *pragmatic* perspective. *Truth* is that which helps us understand the world better, and *objectivity* is achieved when another researcher could be expected to elicit similar data using the same methods (Simmons, 1985; Smith, 1984).

Pragmatists see theory from an *instrumental* perspective. A theory does not represent truth, but instead represents ideas that best fit the facts as they are currently known (Smith, 1984). Therefore, using a range of theoretical perspectives is better than

adhering to any single perspective. Denzin (1989) takes a pragmatic approach to research when he recommends *triangulation* of methods, theoretical approaches and also of researchers as a means to obtain the best possible result from research.

As argued in the previous chapter, conflict occurs only when the actors construe themselves as being in conflict. Different actors in the same situation may see it in a variety of ways and thus feel very differently about it (Ross and Nisbett, 1991). Conflict depends on an individual's feelings and perceptions of what is going on. Similarly, the satisfaction gained from a recreational activity depends on the perceptions of the participants. Understanding conflict in any recreational setting, therefore, requires methods which allow the researcher to *understand* how, when and why respondents feel negatively about a recreational setting. However, the development of conflict is also influenced by factors in the wider social and physical environment. A more separated approach may be useful for exploring these factors.

3.2.2 QUANTITATIVE METHODS

Survey questionnaires are best suited to testing theory that has already been formulated (Glaser and Strauss, 1967), and therefore they are useful for investigating descriptive questions. One of the aims of this research, for example, was to look at the differences between mountain-bikers and trampers. Past research indicates that descriptions of gender, age, education, participation in other activities, and motivations may be of interest (Manning, 1986). Survey methods allow for a large number of people to be asked these simple questions. Analysis of survey data can also draw attention to patterns and links that exist within the sample population, and thus may give clues to changes occurring at a macrosociological level.

However, quantitative methods have a number of weaknesses. Complex communication is impossible in a survey questionnaire. Not only does one have to account for the

reading ability and aptitude of respondents, but both questions *and* answers can be interpreted differently from what either writer originally meant.

Closed (tick-the-box) questions elicit opinions that people may not have held previously. In comparison, open questions may result in shallow and *off the top of the head* answers that do not reflect what that person really feels (Babbie, 1989). In my own experience, open questions are answered much less often than closed questions, possibly because people are not inclined, or able, to frame short answers to what might be complex questions. Neither type of question can be rephrased or clarified when used in self-administered questionnaires, and nuances of context and qualification cannot be addressed adequately.

The construction of the questionnaire will influence answers to questions that vary with context. Open questions may elicit relatively few answers, where closed questions influence the content of those answers. As Babbie (1989:255) notes:

Survey research is generally weak on validity and strong on reliability.

Closed questions are reliable because, given the same range of closed answers, a similar spread of replies could reasonably be expected over and over again. However, if the replies change with the range of offered answers, then the validity of the results must be in question. If the choice must be between open questions (that elicit shallow answers), and closed questions, then it seems that the researcher is caught in a double bind. Of course, if the researcher is interested only in finding out how individuals within the population are spread across a given range of options, then the results of closed questions will result in valid data. Validity, therefore, is heavily reliant on the context of what is already known and of the question the researcher is asking.

Survey data are unlikely to reflect how people feel, think and act with respect to recreational settings, especially if the questions are about experiences, or things which are

not normally put into words. If a person is being questioned about their motivations for a particular recreational activity, for example, it may take considerable thought to frame an answer. In fact, it seems that quantitative methods are most suited for developing the separated knowing of Belenky *et al.* (1986), but are unsuitable for developing connected knowledge or understanding. Neither is survey research an effective way to generate new theories or to understand the subjective worlds of the actors in the research setting. The subjective nature of recreational experience implies that the subjective experiences of the actors are important in recreation research.

3.2.3 QUALITATIVE METHODS

Qualitative methods are more suited to generating theory and understanding meaning in a subjective context. In-depth interviews and participant observation allow researchers to investigate complex issues and to develop connected understanding. Communication that encourages intimacy and conveys personal meaning is necessarily a two way process that takes considerable time and is possible only in unstructured or semi-structured settings. With time to get to know the respondents, it is possible to clarify points, be sure of meanings and to ask the same question many times in different contexts so as to understand how each individual qualifies her/his answers.

In-depth interviews allow a depth of enquiry, but the researcher cannot effectively question a large number of people because of the time required. The in-depth approach over a large number of respondents would seem to be the best possible method, however it is debatable whether the results of such a study would be any more reliable and valid than one using a range of methods. As the research progresses, one begins to hear the same things from respondents. It is this repetition that forms the basis of the findings. As the interviews become more repetitious, it becomes difficult to listen carefully enough to justify the large amounts of time spent in in-depth interviewing. Thus, the nature of the communication in in-depth interviews limits the ability of the researcher to contact a large sample in a consistently meaningful way.

Once the stories become familiar through repetition, methods such as participant observation, searching the popular media (e.g. newspapers and cycling magazines) and carrying out survey research become more useful as one searches for confirmation that these stories are similar throughout the wider population.

3.2.4 SECTION SUMMARY

In-depth interviews provide very high internal validity over a small part of the population, while survey questionnaires provide high external validity (or reliability). In-depth interviews, allow researchers to explore meaning and context in detail. Because of the open nature of the communication, qualitative research may allow the development of new theory or what Glaser and Strauss (1967) call *grounded theory*. Grounded theory is formulated inductively from the interview data while, in comparison, survey research uses logical deduction and hypothesis testing to test existing theories. Survey research and in-depth interviewing thus have different and complementary functions at the theoretical level.

This study is effectively pragmatic in nature, assuming that no single approach to research methods will be adequate in itself. Each method complements the others in some way, so that by using a range of methods the social researcher can generate data that is more reliable and valid than if they use only one method. Denzin (1989) advocates this triangulation of methods as a way of eliminating some of the shortcomings in research. The remainder of this chapter outlines the methods that were used, the way that they were used and some of the problems that were encountered.

3.3 DATA COLLECTION

In-depth interviews, participant observation, focus groups and survey methods were utilised in this research. This section is an account of the way in which the methods were used. It also includes some of my observations on the relative strengths and weaknesses of the methods for collecting data.

3.3.1 IN DEPTH INTERVIEWS

Twenty seven semi-structured interviews were conducted with 32 people (five interviews involved two people) over the course of the study period which ran from December 1991 to March 1993. Most of them were undertaken in early 1992. Interviews ranged in length from 45 minutes to two hours with most lasting one to one and a half hours. Most respondents chose to be interviewed in their homes, however, this was negotiable because it was important that they felt comfortable. In one case, the respondent preferred to meet in a cafe and in two other cases the interviews were at the interviewees' places of work.

In every case, the interviews were recorded on tape for later transcription. Interviewees were asked if they would allow me to record the conversation on tape, and no-one refused. However, on two occasions it was obvious that the respondent was uncomfortable with the tape-recorder going and, on those occasions, the conversation was much easier after the recorder was turned off. Two interviewees requested that the tape recorder be turned off during certain parts of the conversation, and in some cases, the interviews ran for longer than the available tape. If there were breaks in the tape, or if the conversation continued after the tape was turned off, I made notes to record the direction of the conversation.

As soon as possible after the interview, I sat down and recorded my thoughts - either on tape or in writing (whichever was more convenient). These *notes on notes* enriched the data of the interview by noting any interesting ideas that had come to me during the course of the interview, and any other relevant feelings or facts that came to mind before, during or after the interview. Questions that came to mind after an interview were also recorded here and used in subsequent interviews. Thus, the interview process was constantly evolving. My final interview was very different to my first one because of the

ongoing process of analysis, and the development of my own theories throughout the course of the research.

Interviewees were contacted in a range of ways. My earlier contacts were made at public meetings that had been called by the Canterbury Department of Conservation to discuss aspects of mountain-biking in the Canterbury area. These included both trampers only respondents (that is, those trampers or walkers who had no experience mountain-biking) and mountain-bikers. One or two early interviews were conducted with people I met incidentally and who expressed strong views on the subject of mountain-biking. Further contacts were made using the *snowballing* technique outlined in Lofland and Lofland (1984). At the end of each interview, respondents were asked if they knew anybody that I should talk to. Invariably, I received a list of names and phone numbers. Other interviewees were chosen from the many questionnaire respondents who had indicated they would be prepared to be interviewed. Respondents were chosen to maximise the range of age, experience and attitude represented in the interview sample. Interviewees ranged in age from 15 years to over 70 years. They included mountain-bikers and trampers with a wide range of experience in their respective activities, people who participated regularly in both activities, people with a wide range of opinions about the advent of mountain-biking, and managers of the recreation resource.

In general, I contacted one respondent at a time to arrange an interview but sometimes partners or friends that were present also listened in and contributed. Sessions with more than one interviewee proceeded in a number of different ways. Sometimes a partner would not join in the conversation except to add to an answer or to challenge the accuracy of a statement the interviewee made. In other interviews, both answered the questions on an equal basis. At all times, when there was more than one person present, interview respondents appeared more relaxed and the interviews lasted around two hours.

The research included two focus group sessions. In both cases the participants knew everyone else in the group, hence these groups were excellent for developing ideas and exploring more complex issues. Whenever there was more than one interviewee present, it was easier to elicit descriptions of feelings and motivations, and to compare the experience of walking with the experience of riding. These are things that many people were not used to explaining, and having a friend or friends with whom they could try out ideas appeared to help them put words to experiences with very little input from myself.

This interaction highlights one of the difficulties of in-depth interviewing. It is very easy for the researcher to inadvertently ask loaded questions or to put ideas into the heads of those being interviewed. While there are many ways of asking questions which avoid these problems, it is much easier if the discussion takes its course with a minimum of input from the interviewer. During focus group sessions, individuals in the group often questioned the assertions of others in ways that an interviewer could not afford to do! Additionally, new questions and perspectives were raised to provide many new insights that could not have come from interviewing each individual in turn. The chance of the interviewer invalidating data by asking a leading question was also decreased in these situations.

I was constantly impressed with the time people were prepared to put into these interviews, which contrasted sharply with the time they were prepared to spend answering a questionnaire. In asking people to fill in questionnaires, through watching people filling in questionnaires and through talking to other researchers about their experiences in similar situations, I noticed that people often appear uncomfortable when they cannot qualify an answer or are unsure what a question is asking. Because understanding requires *equality with* people rather than *mastery over* them, it seems that individuals might feel less threatened when they feel understood. This difference may be

one of the reasons that respondents seemed happier to talk face to face for two hours rather than to fill in an impersonal questionnaire which took only 15 minutes to complete. It seems that far from being unwilling to impart information, respondents are happy to talk and to spend much time doing so, if they feel understood.

The decision to stop in-depth interviewing came when it seemed that the stories I was hearing, and the theories I was developing, had remained the same for several interviews and for that reason, it was becoming more difficult to listen to each respondent with the appropriate intensity. It therefore seemed more profitable to look at data from other sources.

3.3.2 PARTICIPANT OBSERVATION

Participant observation was used as a complement to the in-depth interviews and the questionnaires. Observations were done in a range of settings: such as attending evening meetings and day trips with the Canterbury Mountain-Bike Club, and walking on some of the Port Hills tracks. I also went along to public meetings that were discussing mountain-bike use and talked to many people informally, often at unexpected times. Conversely, when I was out looking for people to talk to about mountain-biking, there was sometimes no-one there! Thus, I was unable to separate the research process from other aspects of my life. At no time did I ever hide my role as researcher, but neither did I tell people without their asking me. I was often thrown unexpectedly into the researcher role when people found out that I was studying conflict between bikers and trampers, and wanted to get their view across.

Participant observation proved particularly useful for consolidating information gathered from interviews and questionnaires and for questioning my interpretation of that information. For example, it was my conversations with people at a range of social occasions that convinced me that the stories I was hearing during my interviews were reflected throughout a much larger portion of the population than I had managed to

interview formally. It was thus the continuous reiteration of interviewees' stories during these casual conversations that convinced me that it was time to *leave the field* and focus my attention on analysing the data.

3.3.3 QUESTIONNAIRES

Questionnaires were pre-tested by students at Lincoln University and by 31 members of the Canterbury Mountain-Bike Club who attended a monthly meeting early in 1993. As a result of the pre-test, some of the questions were rephrased or simplified. No question was removed. In order to try to obtain a good response rate, the questionnaire was kept as short and as simple as possible. In general it seemed to take respondents somewhere between 10 and 30 minutes to complete.

Questionnaires were sent both to mountain-bikers and trampers. Obtaining a sample that would not affect any of the variables in the questionnaire was especially difficult for the mountain-biker group. None of the bike shops I contacted kept address lists of those who have bought bikes from them. The lists some shops did have were not freely available and, additionally, were compiled from race lists, so using them would affect estimates of off-road use and race participation. Similarly, club riders are, by definition, off-road riders which would affect estimates of off-road use and of race participation. In addition, the mountain-bike owners I talked to informally, who did not ride off-road, did not identify themselves as mountain-bikers and therefore did not feel qualified to answer a questionnaire about mountain-biking. This last observation makes it seem unlikely that even a random population survey would provide an accurate estimate of off-road use as a percentage of mountain-bike owners.

Eventually, bikers were contacted through the Canterbury Mountain-Bike club (46 sent), through handing out 100 questionnaires at *The Big Coast* (an off-road recreational ride, organised by Tourism Resource Consultants) in Wellington in March 1993, and 72

questionnaires were handed out to students standing in registration queues at Lincoln University in 1993.

Sampling of trampers was easier because they are more organised in clubs and so I sent questionnaires out through tramping clubs. In all, 400 questionnaires were sent out to trampers. Many clubs were not willing to release their address lists but were prepared to put questionnaires in with their newsletters. Additionally, one tramping club initially refused to send out my questionnaires because they believed that they did not have enough mountain-bikers in their club to warrant it. They reversed their decision when I explained the questionnaire was specifically designed to find out what trampers thought about mountain-biking. This story highlights the need to design the questionnaire cover so that potential respondents did not immediately discard them thinking they were designed for mountain-bikers.

Wherever possible, a reminder notice was sent out seven to ten days after the questionnaire. Because I did not always have access to people's addresses, it was not always possible to send out the reminders, and this was reflected by the response obtained from the various samples.

3.3.4 RESPONSE RATE

Overall, the response rate was 71 percent. Response rates across various sample groups (see table one) indicate that reminder notices have a significant effect (Chi square = 91, $p \ll 0.001$). Reminder notices were not sent to the Hospital Tramping Club, the Catholic Tramping Club, the Big Coast, all of which show significantly lower return rates than those of the other samples (see Table I). The Lincoln sample shows a high return rate even though there was no follow up, however in this sample, people were handed questionnaires in person after being asked whether they had a mountain-bike. Anyone who did not want to fill in a questionnaire could have said *no* to the initial question.

question. These people were also in student registration queues, and had much time to fill in after they were given the questionnaires, hence the high response rate.

Sample	Number sent	Reminder Notices?	Returns	Response Rate
Over Forties TC	100	yes	77	77%
Peninsula TC	77*	yes	69	90%
Christchurch TC	80	yes	57	71%
Women Outdoors, N.Z.	29	yes	23	79%
Canterbury Mt. Bike Club	46	yes	38	83%
Card (tramper questionnaires)	34	yes	28	82%
Card (biker questionnaires)	43	yes	38	88%
Hospital TC	50	no	29	58%
Catholic TC	30	no	14	47%
Lincoln University	72	no	54	75%
The Big Coast	100	no	43	43%

* eighty originally sent but three returned unopened.

Table I

As the results came in, it appeared that the sample may have been skewed in favour of older people answering the tramper questionnaire and younger ones answering the biker questionnaire. In order to check whether this was due to sampling error, freepost cards, containing a small number of questions, were placed in a variety of huts in Arthur's Pass and on the St. James Walkway. Again, this sample was not random, as respondents self selected according to their willingness to fill in, carry out and post the cards. It seems unlikely that individuals would select themselves in such way as to influence the age distribution of the sample. As it turned out, the relative age distribution of bikers and non-bikers in the card sample were similar to that represented in the questionnaire samples. Further questionnaires were sent out to card respondents who said they would be prepared to fill in a questionnaire. Extensive informal discussions with bike shop

owners, trampers, mountain-bikers and all my participant observations also confirmed the significant age difference between mountain-bikers and walkers who do not mountain-bike.

3.4 DATA ANALYSIS

3.4.1 ANALYSING QUESTIONNAIRE DATA

In the results that follow, there are a number of different sample sizes and sample names. The two different questionnaires had some common questions for trampers, who also owned a mountain-bike, and a large group of respondents participated in both mountain-biking and tramping. Most of my figures distinguish only between *bikers* and *non-bikers* (people who said they had been mountain-biking and people who said that they had not). A smaller group of figures distinguish instead between *trampers* and *bikers* which are, respectively those that filled in a trumper questionnaire and those that filled in a biker questionnaire. As a result, some of the biker samples contain around 173, while others contain around 217, depending on whether the questions were contained in both questionnaires (and whether they were answered adequately by respondents).

Questionnaires were analysed using SPSS (statistics package for the social sciences). Open questions were coded and entered into a spreadsheet, while closed-ended questions were entered directly into the same spreadsheet with no processing. Many respondents answered only the closed questions. SPSS generated frequency tables, or cross-tabulations and Chi square was used to test for significant differences. Wherever a result is indicated as significant in this thesis, it *at most* has a probability of 0.01 of occurring accidentally (i.e. *at least* 99% confidence levels).

3.4.2 ANALYSING QUALITATIVE DATA

The in-depth interviews were transcribed verbatim along with the additional notes on notes made by the researcher at the time of the interview. Notes taken during participant

observations were also typed up along with any comments, insights and thoughts that arose from the observation. These *notes on notes* gradually grew with each interview and provided the themes that make up a significant part of the results section of this thesis. Each interview and observation was coded according to these general themes, and then filed using NUDIST - a computer package designed for analysing textual data. NUDIST allows the researcher to reference and cross reference interview data into whatever themes seem useful. From here the data can be further divided up into subthemes if appropriate. NUDIST replaces the manual methods of cutting up printed matter and pasting it under the chosen headings.

3.5 LIMITATIONS

The method of sampling used in this research was purposive, rather than random, and some of the samples, particularly those of mountain-bikers may have skewed the questionnaire results. Club riders, for example, were mostly off-road enthusiasts, while the riders on the Big Coast would also have just finished an off-road ride, thus these two samples would probably make my estimates of off-road use higher than those for the general population. Similarly, the Lincoln students were likely to be younger than the general population of mountain-bikers, and thus may affect the overall age spread of mountain-bikers. However, there were also mountain-bikers in the sample of trampers that I used, so that, for those questions that were common to both questionnaires, there was an additional sample with a potentially different background.

Relying on tramping clubs also may have affected some of the results. Club members may have had more exposure to opinions about mountain-bikers than those walkers who go out individually and who, therefore, may not discuss the matter with other walkers. Many of the clubs were involved in submissions on mountain-biking, therefore, it is possible that club members might have stronger views on the subject than non-members. These sampling problems will be discussed further in the results chapters.

The main focus of this research was on gaining a profile of mountain-bikers (that is those bikers that take their bikes off-road) and understanding the conflict between the two groups. For these two purposes the sampling is seen to be adequate. The study includes 217 off-road riders and therefore should have built up a good, general picture of these people. Similarly, in investigating the conflict, the views of those who are most vocal and most prepared to answer questionnaires are especially relevant. Additionally, questionnaires were answered by a wide range of people, including respondents who regularly participated in both activities, respondents who appeared to be unconcerned about mountain-biking, as well as respondents who felt strongly on both sides of the conflict.

There may be some question as to whether the sample is representative of the relative number of people with the various standpoints in the general population. However, these results were not contradicted by any of the methods used. Each of the methods confirms the findings of the others where similar questions were investigated. Additionally, much informal conversation over the last three years in a wide variety of situations indicates that these figures *are* indicative of the population as a whole and are therefore reliable and valid.

In retrospect, it would have been better to have sent out the same questionnaire to all groups with some sections that were for mountain-bikers and some for trampers. A single questionnaire would have given a more accurate profile of the group that participates in both tramping and biking - a group which proved to be very important in understanding the conflict. Analysis of a single questionnaire would also have been much easier than analysing two different questionnaires and trying to integrate the two.

3.6 CHAPTER SUMMARY

In-depth interviews, participant observation and survey questionnaires were all used to investigate the conflict situation that has developed between mountain-bikers and

trampers in New Zealand. This is a pragmatic approach based on the idea that there is no *absolute truth* and no perfect way of doing research, given the complexity of social systems and the range of theoretical perspectives that underlie our understandings of conflict within those systems. Each method has its own strengths and weaknesses but when used together, they complement each other and, therefore, increase the internal and external validity of the overall research process.

The research was carried out in the Canterbury area, however, respondents were not limited to talking only about the Canterbury area. Much mention was made of the Central North Island, Central Otago and the West Coast of the South Island, for example when bikers began to speak of their favourite rides. The Port Hills near Christchurch provided a good venue for participant observations, because of the large number of different users in the area. It also proved an interesting area of focus in terms of the familiarity for most respondents and the long associations some people had with the area.

Chapter 4

RESULTS

4.1 INTRODUCTION

The following chapter outlines and discusses the results of the research. The theoretical perspective outlined in Chapter 2 predicts that conflict is a complex interplay of three factors: the physical and social context in which the conflict exists; the attitudes and perceptions of the individuals who are in conflict; and the behaviour of those individuals. This framework provides the basis for the organisation of this chapter.

Little empirical information is available on the profile of mountain-bikers (either in New Zealand or overseas), so much of this chapter describes the new sport of mountain-biking and the people who participate in it. Mountain-biking offers a range of recreation opportunities, from a relaxing ride on a gentle, smooth forest road, to a challenging, physically strenuous and technically difficult ride on a narrow forest track. The participants in this sport tend to be under thirty, male, well educated, and experienced in other outdoor activities.

Perceptions and attitudes are explored in detail later in the chapter. Factors such as attitudes towards the environment, place attachment, mode of experience, activity

specialisation and tolerance are all important in the conflict between mountain-bikers and trampers. Trampers feel that mountain-bikes damage tracks and the natural environment. Concern over environmental damage is related to the way people think about places. People negotiate a meaning for a place both directly, through their own experiences there, or indirectly through interaction with people who know the place. Walkers, who value the Port Hills, feel that bikers undervalue them because biking causes environmental damage.

Trampers feel unsafe where there is a risk of meeting bikes on narrow downhill tracks through bush or trees. The questionnaire data, indicated that personal safety was less important than environmental damage. However, the interviews indicated that it affects walkers' sense of relaxation, and their overall enjoyment of walking. In comparison, some bikers argue that biking only causes *different*, rather than worse, environmental impacts than those caused by walking. They consider that the main reason for the conflict is mountain-biking's bad image, which comes from the irresponsible behaviour of some bikers, and media treatment of mountain-biking. They feel that it is unfair to penalise all bikers because of the exploits of a few.

What appears to be more important is how meeting other users can, or cannot, be incorporated into the recreational experience. It is more difficult for walkers to incorporate meetings with bikers than *vice versa*. The motivations of the two groups are significantly¹ different, although there is much overlap between bikers' and walkers' motivations. It is here that mode of experience, perceptions of difference and attachment to the resource have a major role to play in explaining conflict between mountain-bikers and trampers.

¹The term "significant difference" is used to indicate a statistical significance at the 99 per cent level of confidence.

The behaviour of the two groups involved in this conflict is the final subject of the chapter. Galtung (1971, cited in Bercovitch, 1984) suggests that behaviour affects, and is affected by, individual attitudes and the general conflict setting. In the recreation setting, mountain-bikers threaten the experiences of walkers, but in the political arena where decisions on resource allocation are taken, walkers, who are more politically organised, threaten bikers. Both groups, therefore, have the ability to threaten the other, which has helped increase the conflict.

4.2 MACROSOCIOLOGICAL OR SITUATIONAL FACTORS

The overall situation includes factors such as the development of new technologies, and changes in economic and social conditions which affect people's approaches to leisure and recreation. To begin with, this section profiles New Zealand mountain-bikers and compares them with other outdoor recreation participants.

4.2.1 MOUNTAIN-BIKER PROFILES

Mountain-bikers are varied in age, interests, previous experience and preferences.

Although people in a wide range of age groups bike, the group is dominated by males under 30, who have tried many other outdoor activities. Age, gender and past outdoor experience are indicative of where preferences for mountain-biking lie.

4.2.1.1 Sex Distribution

As Figure 5 shows, relatively few women mountain-bike. In particular, few school-aged girls regularly mountain-bike off-road (I heard of none during the entire course of my research), whereas observations on the Port Hills indicate that many teenaged boys ride their bikes off-road. School-aged male respondents did not know any females of the same age who mountain-biked, but they each knew about 10 to 15 males who rode regularly off-road. Teenaged females returned two of the cards that had been left in tramping huts, so some teenaged girls are tramping. There appeared to be no school-aged members of WONZ (Women Outdoors, New Zealand), and there were no females

of school-age in the mountain-bike club. This fact is not entirely unexpected. Many articles in feminist literature discuss the under-representation of females in outdoor activities (Lynch, 1991) and in particular the lack of teenaged, female participation in sport (Gray, 1981).

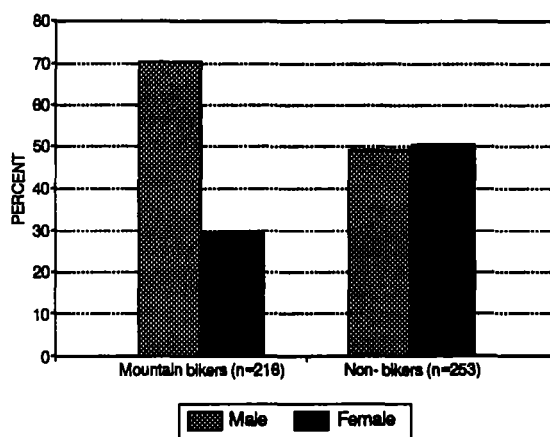


Figure 5: Sex Distribution of Bikers and Non-Bikers.

Of interest in this study are the even numbers of males and females who make up the walker-only or non-biker sample. During the late 1970s and 1980s a large number of tramping clubs that provided more for women were formed (Bell, 1990), which may explain the more even sex distribution in the trumper sample.

Women begin mountain-biking at a later age than their male counterparts. Most of the female bikers contacted were in their 20s. All of them had begun mountain-biking in their late teens after leaving school and most had previous experience in other outdoor activities such as tramping, climbing or kayaking. Women experienced in the outdoors have similarly interested friends with whom they can begin mountain-biking. Burch (1969) notes the importance of social circles in the development of leisure styles, while Stokowski and Lee (1991) and Stokowski (1994) found that wider social network ties are important, especially for facilitating new leisure activities. Women without much previous outdoor experience are unlikely to have friends with an interest in mountain-biking. What is unexplained is why women begin these things later than their male counterparts.

4.2.1.2 Perceived Competence and Competition

Perceived ability is a strong predictor of participation (Iso-Ahola & Mannell, 1985).

People who feel most competent are most likely to participate, whereas perceived incompetence constrains participation. Thus, women who perceive themselves to be less competent than their male counterparts (especially during their teenage years) will be less inclined to begin mountain-biking, particularly as a goal-oriented, competitive approach is more highly valued by our society than a process-oriented approach. The women who did mountain-bike all mentioned deciding that they were going to learn and improve their skills (the implication being that they had to *catch up* to their male companions), indicating that all felt capable of learning the skills needed. It seems possible that teenaged girls perceive themselves as incompetent and either do not want to bridge the perceived gap in competence, or do not believe that they can. To some extent, this assertion is supported by the comments of outdoor education instructors that school girls achieve more in single sex situations (Lynch, 1994; pers. comm.).

Many of the women I talked with, formally and informally, had little or no interest in competition riding, and many mentioned that the competitive image of the Canterbury Mountain-Bike Club had put them off joining. Bell (1991), in her study of gender relations in tramping found that women as a group, were less interested in *competing* or a goal-directed approach to tramping, and more interested in a process-oriented approach to tramping. If bikers are also mainly goal-oriented, many women (and some men) might be reluctant to join clubs dominated by riders who are focused on doing physically challenging rides, that is, who are more goal-oriented in their approach. Certainly, female bikers I spoke to were reluctant to go out with the mountain-bike club because they perceived that keeping up with club members would detract from their enjoyment.

Because women begin mountain-biking later than their male counterparts, it may be uncomfortable to go out with a club whose most active members are teenaged males.

The teenaged boys that I contacted were focused on the challenge of the ride, the thrill of speeding downhill and in doing these things in groups. For women without previous outdoor experience, who do not wish to compete, there appears to be little to encourage their participation in mountain-biking.

4.2.1.3 Age

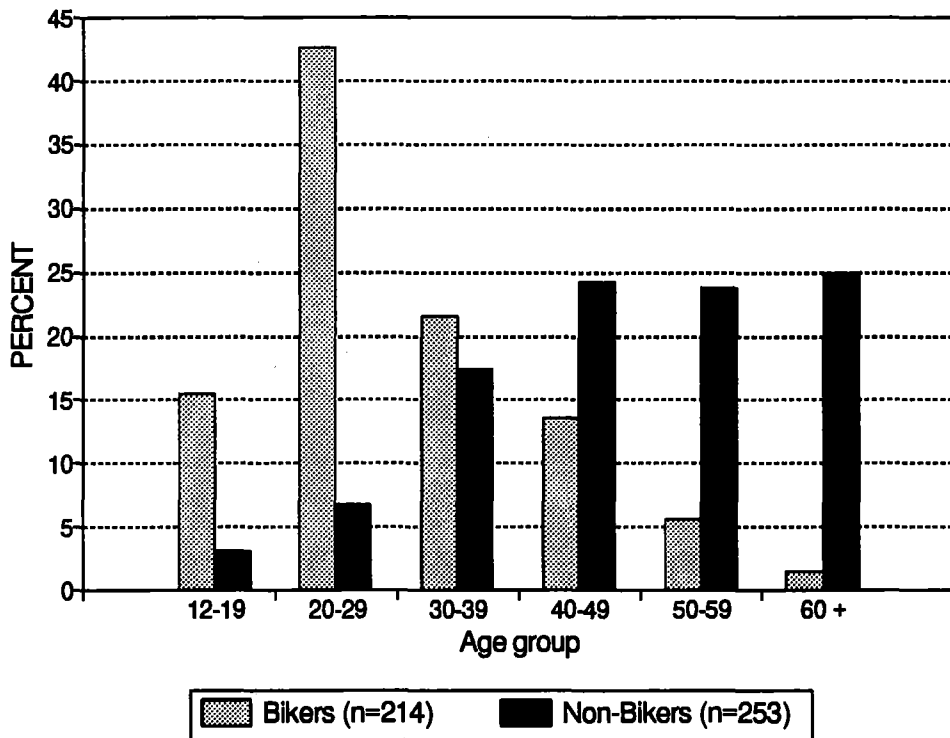


Figure 6: Age Groups of Bikers and Non-bikers.

Figure 6 shows the age groups of those in the two samples who had been mountain-biking compared with those who had not¹. Mountain-bikers are significantly different in age to walker-only respondents. Although only eight mountain-bike questionnaire respondents had not done some walking or tramping, most of the older trumper/walker respondents had not been mountain-biking.

¹ "Non-bikers" and "walker-only" are the terms I have used to describe those in the trumper sample who have not ridden a mountain-bike, where the term "trampers" is used to describe the full sample of trampers, regardless of whether they have ridden a mountain-bike or not.

Having such different age structures in the two groups means that the results of questions on experience, focus and sense of place must be interpreted with care. Age is linked to life cycle stage, experience, specialisation, economic status, and physical fitness, all of which affect participation in recreational activities (Devlin, 1993; Kelly, 1991; Godbey, 1985) and attitudes towards places they use for their activities (Moore and Graefe, 1994; Virden & Schreyer, 1988). Age differences between samples may also highlight generational changes in attitudes and values (Godbey, 1985).

4.2.1.4 Participation in the Older Age Groups

This age difference raises the question, *will younger people who currently mountain-bike continue to do so as they get older?* Age is likely to become limiting where the physical fitness of the participants makes biking difficult, especially in places like the Port Hills near Christchurch, where most bike tracks involve strenuous up-hills and down-hills.

Ideally therefore, there should be tracks to cater for different levels of fitness and preference. At present, there is little for people who want a more gentle ride, a fact that may deter some people from trying mountain-biking. Perceived incompetence may also be a factor in the participation of older people.

Some older walkers do not like cycling. This fact highlights a generational shift in attitudes and experience. One retired male had spent all his working life cycling to work because he could not afford to run a car, so, for him, cycling was a chore rather than a choice. While this attitude may exist amongst older recreationists at present, this sentiment is less likely to be shared by future generations, who have had more choice in the way they travel.

Nonetheless, another respondent noted that he had taken his bike off-road in his youth:

In the UK in the '50s and '60s and for many years before, club cyclists and solo [cyclists] crossed the mountain passes with their bikes - not mountain-bikes, which had not been thought of then, but their road bikes with one and one quarter inch tyres. We called it pass storming. I myself have done a few passes, including the

highest pass in the country, the Laing Ghru in 1964, a 30 mile off-road trip which included a lot of carrying. So it is nothing new!

From different sources I heard of one couple who biked through the Routeburn track for their honeymoon during the 1930s, and another who apparently abandoned their bikes at Harris Saddle when the going got too difficult during the 1950s. So the concept of biking off-road is not new.

4.2.1.5 Club Membership

Most of the tramper questionnaire respondents were over 40 years of age. Trampers were contacted through tramping clubs in the Christchurch area, indicating that younger people (less than 30 years) are not members. People I talked to, both formally and informally, felt that tramping clubs are less popular with the younger age groups than they used to be. Clubs that used to cater for younger members such as the Christchurch and Peninsula Tramping clubs also have few members under thirty. The mountain-bike club has some younger members, but, with a membership of around 40, it has only a small proportion of mountain-bike owners in the Christchurch area. Similarly, Barnett (1991) in his study of rock climbing at Castle Hill noted that the majority of rock climbers in his sample did not belong to clubs. These facts tend to indicate that tramping clubs are not the only ones lacking in younger members.

Although the number of tramping and walking clubs in the Christchurch area has increased over recent years (Bell, 1990), most of these cater for the older age groups who use well tracked, easier routes in frontcountry areas¹. It also appears that older people are joining walking groups more than in the past, perhaps both as a result of Hillary Commission campaigns aimed at getting older people exercising and the changing attitudes and improved health of those in the older age groups. One respondent felt that younger people have many outdoor activities to choose from, making tramping clubs less

¹ Frontcountry is used throughout this paper to mean areas not more than a day's walk from the road. Periurban areas are therefore included in the term frontcountry.

attractive. However, WONZ caters for a range of activities and it has a good age spread with members in their 20's as well as in the older age groups but even their membership is not large.

These observations contrast strongly with Pitt's (1973, cited in Bell, 1991:3) observation that New Zealand was a *nation of joiners*. While the older age groups are active club members, younger people appear less keen to join and even less inclined to serve on committees. This phenomenon may be part of an international move towards more *individuated*, commercial recreation, which implies a generational shift in attitude away from the idea of clubs. People are now participating less in group activities, and more in individual forms of leisure and are less inclined to accommodate others in their plans (Rojek, 1985). It is interesting to wonder whether the decreasing interest in club activities by younger age groups is connected to the political, economic and social changes that have occurred in New Zealand since 1984, when the Fourth Labour Government began changing to more right wing, free market policies.

That younger people are not joining clubs is of concern for a number of reasons. First, clubs have always been seen as effective agents of education. Young trampers were encouraged to join clubs so that they could learn from older, more experienced club members. If young recreationists do not belong to clubs, they may miss having instruction on safety, and on acceptable behaviour in the outdoors. While environmental education in schools may be able to fill some of this need, in today's climate of decreased funding for education, it seems unlikely to provide the amount and type of instruction that might be required. Second, clubs have been a useful point of contact for both information and education from outside agencies such as the Department of Conservation. If particular sectors of the community do not have any contact with clubs, it becomes increasingly difficult for agencies to get information to recreationists. Third, clubs have provided the means for collective action over conservation and access issues.

Declining club membership will cost the recreationists themselves, in the long term, as they will, eventually, lose the political clout to protect either of these interests.

4.2.1.6 Education

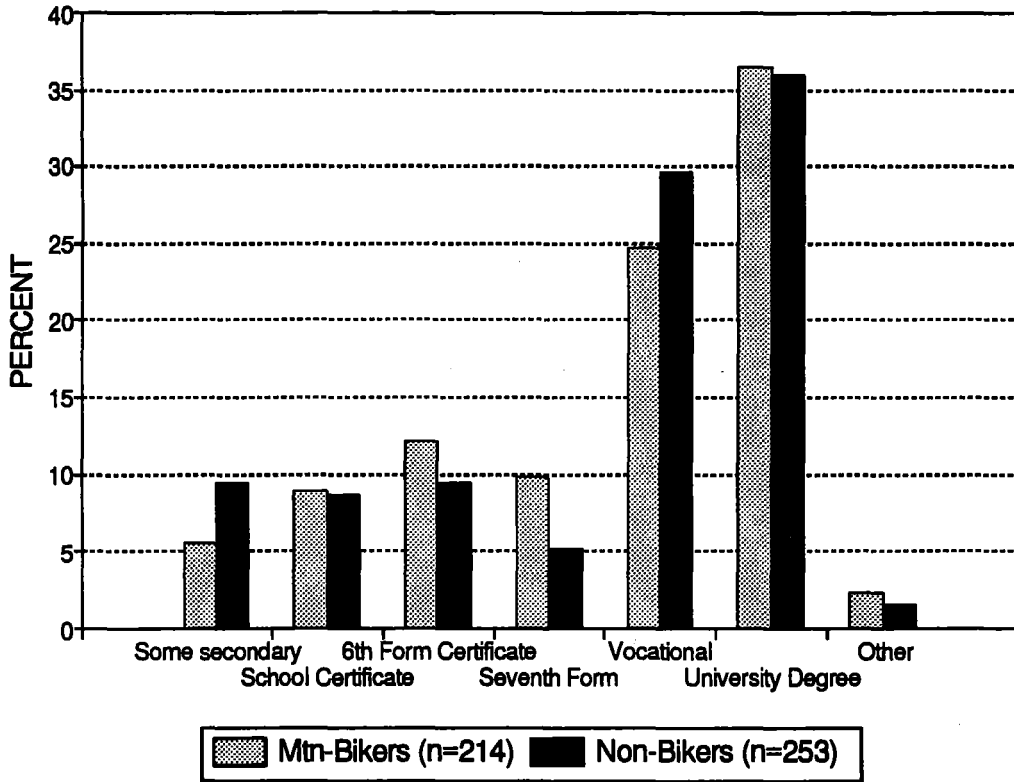


Figure 7: Educational Qualifications of Bikers and Non-Bikers.

As Figure 7 indicates, the education level of bikers is similar to that of the walker/tramper group, which, like that of other outdoor recreationists, is higher than the general population. According to the New Zealand Department of Statistics (1992), only 13 per cent of New Zealanders between the ages of 20 and 40 have tertiary qualifications. Over 35 per cent of my questionnaire respondents have university degrees, while another 30 per cent have vocational qualifications (both categories were grouped into *tertiary qualifications* in the census data).

Additionally, many respondents were at university and had seventh form as their highest qualification at the time of response. One sub-sample of questionnaires were handed to students in university enrolment queues. This sample could have skewed the figures for those with seventh form qualifications, but *not* for those who had already completed tertiary qualifications.

4.2.1.7 Bikers' Past Outdoor Experience

Although walkers feel that cyclists are invading their territory, they are wrong. More people in the mountain-biker group had been road cyclists than in the walker-only group, however, most mountain-bikers have tried a range of outdoor activities. Those with little backcountry experience were part of a very small group.

Motocross

Rodney, the manager of a bike shop,

thought that bikers with little other

outdoor experience usually had

experience in motocross. Significantly

more mountain-bikers than trampers *had*

ridden motor-bikes previously (see

Figure 8), however, all the trail-bikers I

spoke to had also tried a range of other

outdoor activities. According to the

ranger at the Sign of the Kiwi, off-road

motor biking on the Port Hills has

decreased markedly in recent years. It is possible that mountain-biking has taken a few

people away from motocross because it offers a similar experience at less cost and is

considered more environmentally friendly.

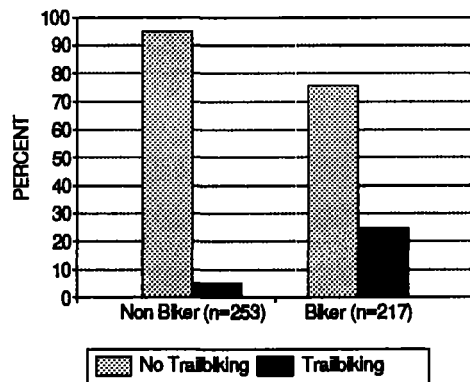


Figure 8: Previous Experience with Motorised Trail-Bikes.

Participants in motorised activities have different attitudes towards the environment than those in self-propelled activities (Jackson, 1987). Self-propelled recreationists such as cross-country skiers are less supportive of moves to provide facilities or to develop recreation areas than those participating in mechanised activities. A small number of respondents had been trail-biking, indicating that individuals do move to more environmentally friendly forms of activity if a suitable substitute is found. From Brian's statement below, it seems that attitudes towards the environment can change.

We did a lot of motor cycle trail riding and this was in the days when farmers didn't consider them obnoxious . . . you could just about go on any farm track, but we found them quite limiting because a lot of farm tracks and old skifield roads . . . have big slips on them and you could only go so far. On the West Coast, some of the old four wheel drive tracks have gotten so washed out that you just can't go there and also the attitude towards motorbikes changed and I think probably our attitude towards motorbikes changed a bit too

So how did it change?

Well, in the sense that they were OK on farm tracks and on four wheel drive tracks, but they weren't OK anywhere else - environmentally they weren't OK.

Brian is now a very keen mountain-biker. It appears, therefore, that mountain-biking can replace motor biking in some cases.

Cycling

Many interview respondents had spent time commuting, racing, or touring on roads. One interview respondent changed from road cycle racing and touring to mountain-biking because he was appalled at the behaviour of motorists.

I was a cycle tourist for a couple of decades and then I became a competitive road cyclist for a decade . . . eased out of that and went back into cycle touring with my wife, and we arrived back in New Zealand five years ago after a [cycle] touring trip around Europe for three months. We went out for a ride and within half an hour we'd been abused and we turned around and said "oh sod this . . . I was anti mountain-biking then . . . and these young guys encouraged me to give it a go. They took me up this lovely piece of track with all this beech litter on it - just twisty, windy, smooth and a few little bumps and it just blew me away . . . within six weeks my wife and I had both bought mountain-bikes.

A keen road cyclist, in his forties, who was adamantly against mountain-biking on the Port Hills, was introduced to it after I interviewed him. He has now added mountain-biking off-road to his repertoire of road cycling, running and walking.

Many mountain-bikers said that when people try mountain-biking, they find they like it. The experience of these two respondents supports this assertion. Therefore, it is reasonable to expect that the older age groups will increase their participation in mountain-biking and that today's mountain-bikers will continue their participation in the sport through into the older age groups, depending on the availability of suitable rides.

Many mountain-bikers use their bikes on roads and many have a mountain-bike *and* a road bike. All who had spent much time biking on roads disliked being close to speeding traffic, watching out for bad mannered motor vehicle drivers, and the feeling of being unable to control the danger in the situation. Mountain-biking is a better option for many road cyclists because this *uncontrollable* danger is eliminated. As a questionnaire respondent wrote:

[Mountain-biking] is rather enjoyable, more so than road racing which is quite harsh in comparison. On some tracks it reminds one of tramping with a bike. For peace of mind it is to be recommended over road racing although (in my eyes) for a complete wilderness experience, tramping and especially alpine climbing leave it for dead.

Some respondents felt that mountain-bikers were likely to have been BMX riders, however, although BMX and mountain-bikes have much in common, there was little evidence of this.

Bikers with Other Outdoor Experience

Mountain-bikers usually have some previous experience of tramping or walking (only eight biker questionnaire respondents had not either day-walked or tramped) and Figure 9 shows that they are more likely than non-bikers to have tried other activities. Even teenaged respondents had some experience of outdoor activities from outdoor education programmes at school. In comparison, most older walkers/trampers had not tried activities such as kayaking, running, *etc.* Some of these people have walked for most of their lives but have not had the opportunity to try out new activities, while others have taken up walking later in life.

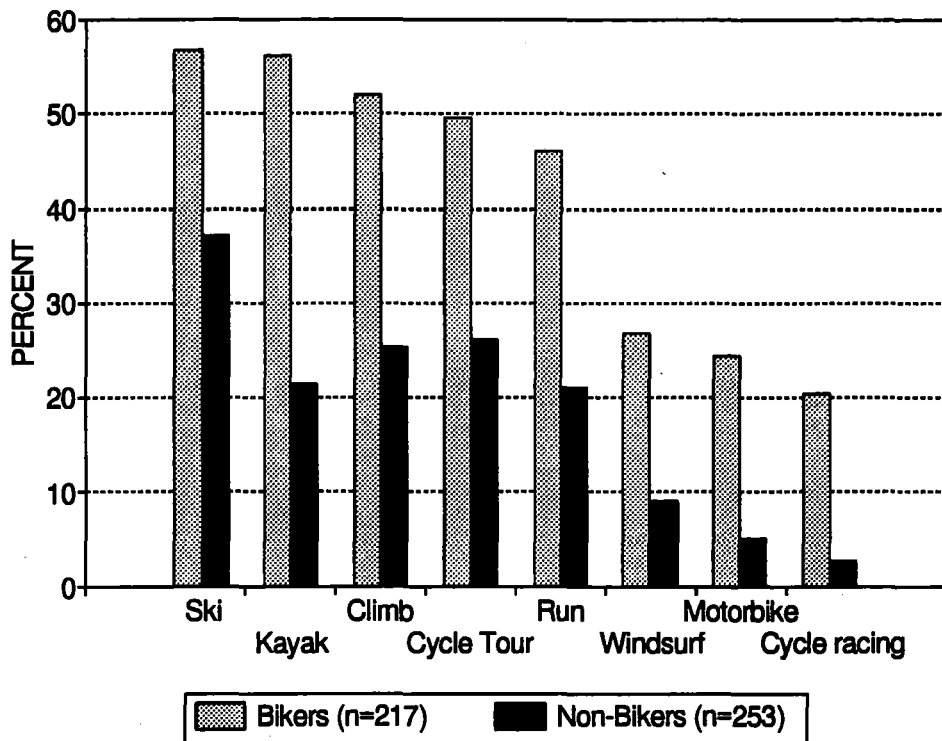


Figure 9: Participation in Other Outdoor Activities.

4.2.2 OFF-ROAD USE

It has proven impossible to get good estimates of off-road use. Apart from the sampling limitations discussed in Chapter 3, there were difficulties in defining exactly when a bike is a mountain-bike, who is a mountain-biker and, lastly, what is *off-road*.

4.2.2.1 What is a Mountain-Biker?

A person that owns a mountain-bike is not automatically a *mountain-biker*. According to some of my interview respondents, some mountain-bikes are a sturdy, more comfortable alternative to ten-speeds and are used primarily for commuting or short trips around town. People I spoke to casually did not regard themselves as mountain-bikers until they had ridden their bikes off-road. However, there is little guarantee that *all* my questionnaire respondents used the same criteria.

4.2.2.2 What is *Off-Road*?

There are also different definitions of *off-road*. For the purposes of this study, off-road includes paper roads, four wheel drive tracks and logging, mining and skifield roads, but whether all of these constitute *off-road* to all respondents is debatable. For the sake of simplicity, respondents were left to decide for themselves, which may have had some bearing on the results recorded here. The factor most frequently used to distinguish *off-road* areas was the absence of motorised traffic. Without exception, bikers prefer not to share tracks with motorised traffic of any type, hence skifield roads can provide a good ride for some bikers during the summer where they would be unsuitable in winter.

4.2.3 ESTIMATES OF OFF-ROAD USE

While there are some major limitations on these estimates as outlined above, the following indicates what is happening in New Zealand. Both Paul and Rodney (not their real names) had worked extensively in the cycle industry and had spent considerable time in the United States. They thought that a higher percentage of New Zealand mountain-bike owners take their bikes off-road than do their counterparts in the United States.

Paul;

. . . a lot of people never go off-road, in fact, in the States, I think it's quoted as being 75 to 80 per cent of all mountain-bikers never get off the road. In New Zealand it's probably not that high . . . it would vary but it's probably still quite high.

Rodney, the manager of a bike shop, noted of his customers;

I think most of them do go off-road . . . some only go off-road once a week and some every couple of weeks but they do go out and go off-road . . . other shops might be different . . .

In the States I used to work part time in a couple of shops over there and only about half of them would go off-road . . . they can afford to buy them as toys over there . . . whereas people here who want to buy a nice bike have to save up so they're not going to buy an expensive mountain-bike and stick it in their garage.

These casual observations may have some validity as comparisons of use between the two countries, but as overall estimates they are unlikely to be accurate.

4.2.3.1 Questionnaire Estimates of Off-Road Use

Of the 297 people who answered the **tramper** questionnaire, 65 said they had mountain-bikes. Of that 65, 75 to 80 per cent had been off-road on their bikes. These figures were obtained from tramping club members who have an expressed interest in the outdoors and are familiar with places that might be suitable for biking, hence they are more likely to take their bikes off-road than members of the general population.

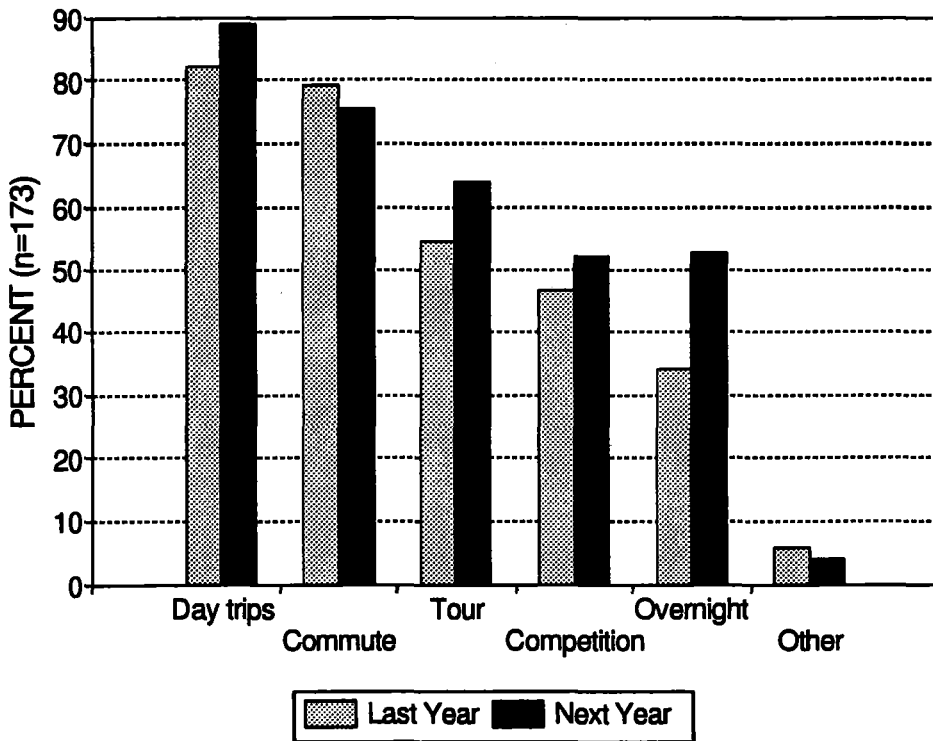


Figure 10: How Bikers Used Their Bikes During the Last Year

Eighty per cent of the 173 people who returned a **mountain-bike** questionnaire said they had ridden off-road during the last year. Figure 10 shows how the mountain-biker questionnaire respondents used their bikes during the last year. My sampling of mountain-bikers would have selected for people who had been off-road as outlined in Chapter 3. The samples were taken from Christchurch and Wellington, both of which

have good mountain-biking areas close to the city. Had the sample been drawn from Auckland, which is not so well served with peri-urban resources, these estimates might have been lower, thus 80 per cent is a high estimate of bike owners who ride off-road. Nonetheless, New Zealand mountain-bike owners are more likely to ride off-road than their American counterparts.

Some individuals buy mountain-bikes with no intention of taking them off-road.

Figure 10 shows the high numbers of people that have used their mountain-bikes for commuting and touring. The sturdiness of mountain-bikes, the upright riding position and their reliable, responsive braking systems make them ideal for travelling long distances with a heavy load. Many interviewees use their mountain-bike for commuting because they can withstand the rigours of negotiating curbs in an emergency. These factors give riders a sense of security, which is part of the reason for the popularity of mountain-bikes.

4.2.4 FREQUENCY OF USE

Although 80 per cent of biker respondents had ridden off-road during the last year, traffic in off-road areas may still be low, as 32 per cent of the 138 who answered the question had ridden off-road less than once a month in the last year. Additionally, 47 per cent rode off-road less than once every two weeks, as Figure 11 shows.

4.2.5 WHERE DO BIKERS BIKE?

Peri-urban areas are, by far, the most commonly used places for riding off-road as Figure 12 shows. This graph results from question 9 in the biker-questionnaire which asked, *If you go off-road, what areas or tracks do you currently use your mountain-bike on (sic)*. Respondents were asked to rank the three places they use most frequently. Of the 138 people who answered the question: 51 gave only one answer; 42 gave only two

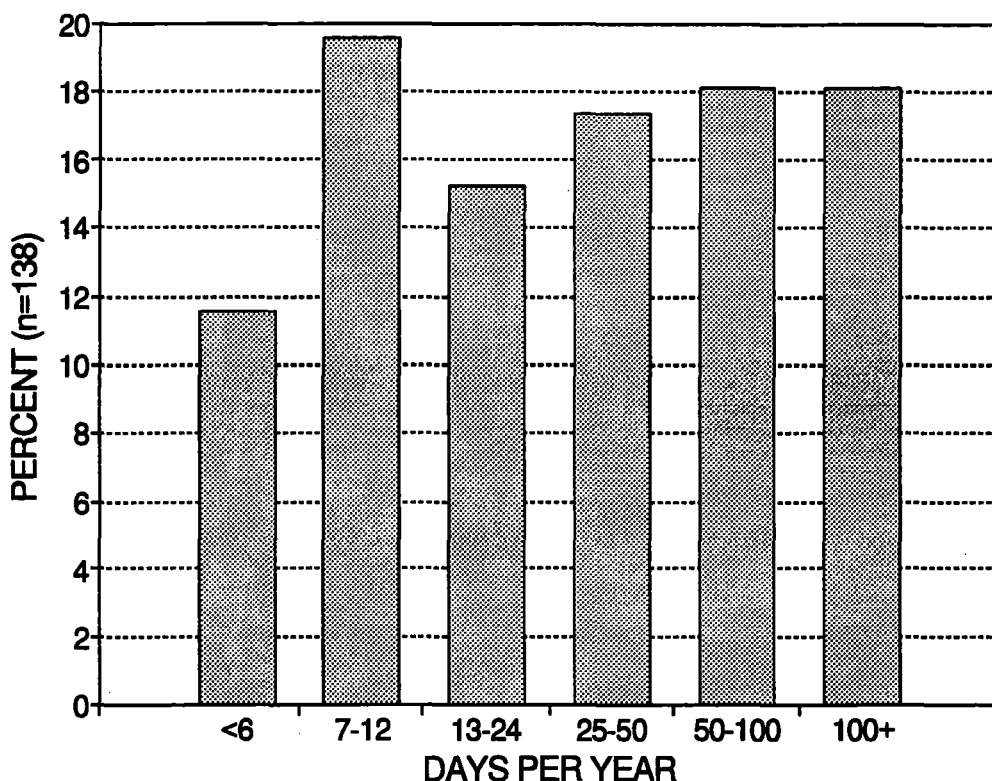


Figure 11: Frequency of Use Off-Road During the Last Year.

answers, and 119 (or 86 per cent) included peri-urban¹ areas as one of their three answers.

Further away from major centres, mountain-bike use drops off dramatically. According to the interview data, few riders ride in remote areas because it takes more time, organisation, access to transport and requires more knowledge of what is available. Additionally, the lightweight equipment required for a weekend trip on a mountain-bike is expensive which also restricts the use of areas further from town.

¹ "Periurban" was used for any answers that included places like the Port Hills, near Christchurch, or the firebreaks around Wellington. Banks Peninsula includes any area on the Peninsula that is not considered part of the Port Hills.

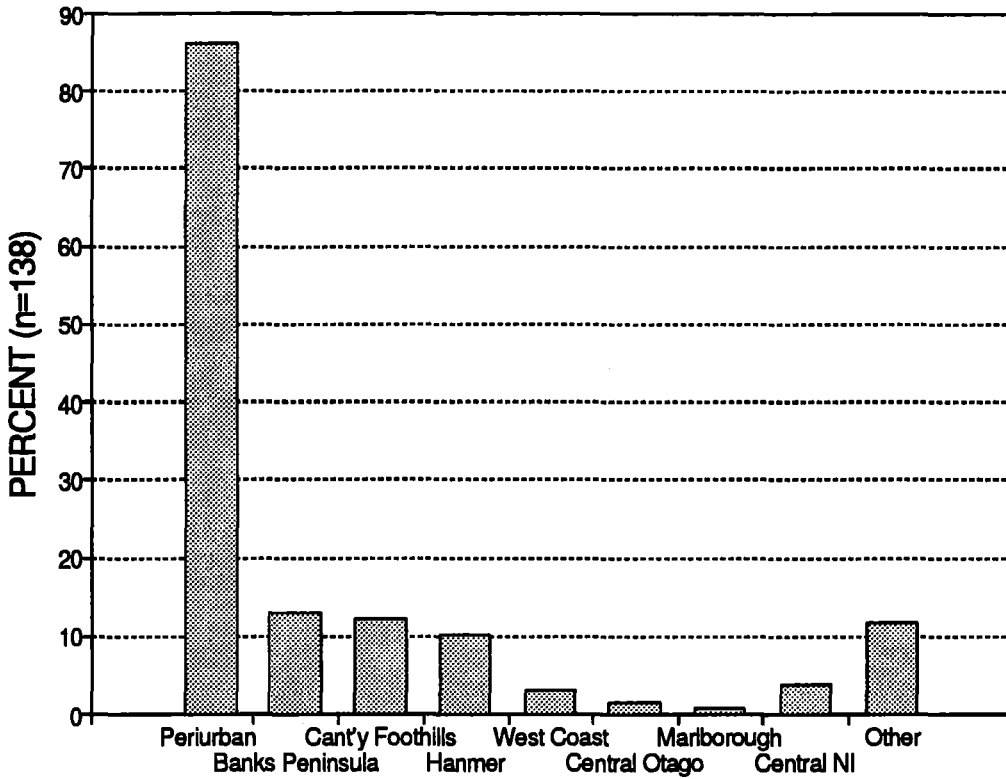


Figure 12: Places that Bikers Ride their Bikes.

4.2.6 STYLES OF RIDING

Mountain-bikers, classify off-road riding into *racing*, *training*, and *recreational riding*.

4.2.6.1 Racing

For some mountain-bikers, racing is an important part of mountain-biking and provides an incentive to develop technical skills and fitness. In New Zealand, a national race series runs through the summer months. Committed participants accumulate points over the whole series but individuals can also enter on a race by race basis. The classes *novice*, *sport* and *expert* provide for a range of technical ability and fitness while each class is divided into *junior*, *senior*, *masters* and *veteran*, according to age. Races offer challenges for participants, with widely different skill and fitness levels.

Four interviewees mentioned that only the top few riders actually race and most others *just ride*, however, everyone who had tried both approached recreational riding differently to racing. While many do not race for first place, they race against themselves or against people who beat them last time. For Mary, completing her first race was a victory, even though she was last by twenty minutes. The second time she raced, her aim was to not let anyone pass her during the final stages of the race. For Jo, doing well in the national series as a whole and aggregating points were important.

4.2.6.2 Training

Everyone who races has to train to maintain or improve their performance. Serious competitors train for two to three hours a day during the week and longer at weekends. Additionally, competitors may train with weights or attend aerobics classes. As for other competitive sports people, training is a time-consuming business requiring dedication:

Jo, for example, described her training regime;

. . . well I do aerobics - I bike a hundred K's a week regardless but that's . . . [on flat roads] . . . if I can stick in something at lunchtime . . . I've only got time for a ride to Q's workplace, which is a flat ride, or I ride for a hill ride up to the Summit Road, up to the Sign of the Kiwi and back down - and then after work I do rides, like I go up somewhere that's quite hard - a gnarly hill climb. I think you've got to keep a balance otherwise you can't improve everything - my strongest point is my fitness and then my up-hilling - my weakness is my down-hilling and my technical ability so I work on them, but at the same time I can't forget my fitness.

Competitors frequently use peri-urban tracks for training runs, however, their direct impact on other users in the area is minimal because they train in the early morning or late evening during the week (outside of normal work hours). At weekends, they attend races or ride in different places to those in which they train. An important finding was that many riders report actively avoiding walkers by using peri-urban areas at off-peak times.

4.2.6.3 Recreational Riding

For some mountain-bikers, racing holds little attraction. Instead, the bike is just another way to enjoy the outdoors. Although, for all respondents, mountain-biking was

recreational, whatever style they chose, bikers consistently referred to non-competitive riding as *recreational*. Recreational riding has many forms, depending on the experience, motivations, and expectations of the rider. Many bikers consider mountain-biking good for developing or maintaining physical fitness or for getting into the outdoors in short spaces of time.

Bikers approach a recreational ride differently to the way they approach a race:

A ride is more leisurely - those that want to, go ahead - those that don't, stay back and you have a lunch break - picnic - [you] don't do that in a race.

. . . you wouldn't stop for lunch . . . no it's a different sort of thing - you're in full race mode - you just keep going . . .

Well when I'm riding I put my bike over the fence and place it down, when I'm racing it's just Poww! - you know - I'm really quick and I jump over the fence.

Very occasionally a race may be ridden *recreationally*, although Paul appeared to treat this story as a (slightly admirable) joke:

. . . X and three other old guys went to a race in [the] Geraldine [area] and took their lunch - it took them seven hours when the winning time was four hours but they weren't worried they were just there for the ride.

For these riders this race was an opportunity to ride in an area that was not open normally for public use. In this situation, the race was a means to an end rather than an end in itself.

Recreational riding has been the primary focus of this study because recreational riders have the greatest impact on other users. They use tracks at similar times to walkers and there are much larger numbers of them in the more heavily used areas.

4.2.7 PREFERENCES FOR TRACKS

There are few clear patterns that predict people's preferences for tracks, with many bikers saying that the best kind of track is one that is varied in terrain and technical difficulty. Preferences for narrow and more technically difficult tracks develop with experience and with competitiveness. Of my interview respondents, those that rode in

the most technically difficult areas were also interested in competing. In comparison, bikers with little interest in competition indicated they were more comfortable on wider, smoother tracks, such as four wheel drive tracks, old railway lines, or mining roads.

Quite a number of respondents noted that old mining tracks on the West Coast were the nicest to ride on, while others found mountain-biking a way to enjoy four wheel drive tracks that would be boring to walk.

While there are many mountain-bikers who enjoy riding on four wheel drive tracks in open country, they will not satisfy all bikers, all the time. As their skill increases, they tend to look for more difficult challenges and more variety. While using a four wheel drive track may be acceptable some of the time, it will not satisfy bikers who want to get away and enjoy the peace and quiet of the bush.

4.2.8 HAZARDS

Both mountain-bikers and trampers felt that some bikers are ill-equipped to deal with emergencies. Trampers were concerned that bikers they met while on overnight trips appeared to be carrying very little gear. While mountain-bikers carry relatively small packs for overnight trips, it appears these bikers are usually very experienced in the back-country, having lightweight equipment and being skilled at deciding exactly what they need. A few interview respondents, all very experienced trampers, noted that the gear they carry overnight on a bike is very lightweight;

. . . if you go for an overnight trip, you take a 30 to 35 litre pack . . . and cram everything you need into it. The same safety rules apply as for tramping - you need to carry three layers, but you just cut it down very light . . . a very small sleeping bag - one filled with down on the top only and sometimes you debate whether to take a stove . . . often you just take cold food because that cuts out the billies . . . You carry it on your back because a carrier is more to catch on and generally you stay in huts so you don't have a tent to worry about . . .

Overnight trips on a mountain-bike tend to be only one to two nights in length, so mountain-bikers need less gear. The biggest area of concern amongst bikers is

inexperienced mountain-bikers going on day trips without the appropriate food, clothing or repair gear.

4.2.8.1 Hypoglycaemia

Mountain-biking, like cycling generally, is a strenuous activity so it is not uncommon for a rider to become hypoglycaemic or to run out of energy. From personal experience, running out causes one to get the shakes and to feel overwhelmingly weak. The *bonks*, as cyclists call it, can be serious if there is not sufficient food because it is difficult to keep going. The ranger at the Sign of the Kiwi deals with this problem frequently and has had to give away Moro bars to mountain-bikers and road cyclists so they can get home.

This subject was a topic covered extensively at one mountain-bike club meeting. A number of people with little experience in the outdoors had obviously had problems on club trips. The *bonks* are much talked about in cycling fraternities, but the same phenomenon is not so well known to trampers. I had never experienced running out whilst tramping, even on the most strenuous trips. However, it has frequently occurred on cycle touring trips, an experience that seems to have been shared by others who have done both activities. Therefore, unsuspecting trampers, planning from tramping experience, could run out of food on a mountain-biking trip.

4.2.8.2 Dehydration

Dehydration is another very real problem as it creeps up on riders who are unaware that they need to keep drinking. Similar problems are experienced by long distance runners. Quite a number of bikers I spoke to had become severely dehydrated during races. Dehydration is important for recreational riders who can easily find themselves a long way from drinking water. Overall the physical intensity of cycling is deceptively high, so it is easy to become hypoglycaemic or dehydrated.

4.2.8.3 Breakdowns

Mountain-bikers can end up a long way from help because they can travel long distances quickly. Breakdowns (of bikes or people) can, therefore, be serious, especially if the rider is inadequately equipped. Experienced mountain-bikers who have had breakdowns in these places expressed concern that younger or less experienced bikers are liable to get themselves into trouble by not carrying the appropriate repair gear.

4.2.9 WIDER SOCIAL INFLUENCES

As outlined in the literature review, there are likely to be many macrosociological changes that are impacting on the recreation patterns of New Zealanders, as already mentioned in the section on club membership. It appears that factors such as changes in employment patterns, economic well-being, education, commercialisation and commodification are affecting New Zealanders' (in particular, Cantabrians') use of the outdoors. Some people appear to be constrained by their economic circumstances. They cannot afford to travel far for their recreation and mountain-biking is seen as a relatively cheap and accessible form of recreation. Other mountain-bikers are not constrained economically, but appear instead to be constrained by time.

4.2.9.1 Economics.

One of the advantages of mountain-biking for younger people is that they do not need extra transport in order to go out for a ride. Kayaking, skiing and tramping require the use of a car, which many do not have. The significance of this economic factor was amplified when several of my interview respondents noted that they had started tramping as teenagers. Every Friday night they caught the railcar up to Arthur's Pass and returned on the Sunday night service.

At that time, Railways was run by the state, so that both services were within the price range of young trampers. Since Railways have had to compete commercially with road transport, the price has gone up and the frequency of the service has dropped. The

current service is expensive, runs only during the day time, is aimed at tourists, and no longer stops at convenient starting-off points for trampers. Private transport is now the only option for people wanting to go tramping for a weekend. Most teenagers cannot afford a car, and there is the added problem of cars getting broken into when parked at road ends.

In comparison, individuals noted that they could ride a mountain-bike from their back door step and get up onto the Port Hills. Thus, mountain-biking allows people to get into the outdoors cheaply and easily. It also appears that the Port Hills will be under increased pressure from this user group, a fact that may contribute to the development of conflict in the area.

4.2.9.2 Time

The popularity of mountain-biking seems, in part, to be due to its ability to provide a concentrated physical and mental experience in a short space of time. Many mountain-bikers feel that mountain-biking is a good activity when they are short of time and unable to go tramping or kayaking (for example) for a whole day or a whole weekend.

Fred a keen kayaker, skier, rockclimber and alpine climber said:

. . . that's where my mountain-bike is useful. It's a way to get out of the city for an evening or an afternoon . . . it's like a quick pick-me-up, because I actually find [it's good] spending the weekend in town and going up [onto the Port Hills] because I've got time to catch up on the things that need doing at home.

Therefore, it seems that, as well as being more economically feasible for some, mountain-biking is an ideal activity for those with little spare time.

Many interviewees and some questionnaire respondents felt that family and work commitments meant that they could not get away tramping or climbing and mountain-biking provided a reasonable alternative. Mountain-biking was also seen as a good activity for mixing with other pursuits, for example, windsurfers felt that mountain-biking was the ideal sport for filling in windless days.

4.2.9.3 Time Deepening

Time deepening, according to Goodale and Godbey (1988), is a phenomenon reported by those looking at changes in western lifestyles over time. As people become financially and educationally better off, they have a wider range of leisure choices available to them. Furthermore, these choices are broadened by the advertising media and the market economy, which encourages innovation and invention of new technologies. As a respondent said in discussing his job;

. . . You get lots of money so you can buy toys to play hard in the weekend . . . for some reason I can't seem to save money because I'm always buying something new.

An interesting corollary of this freedom of choice is that time has become scarce (Goodale and Godbey, 1988). This thread ran through a small number of my interviews and through a large number of informal conversations held over the last three years.

Paul, a keen outdoor sportsperson put it best by saying;

I think one of the things I have noticed is that I've tended to try and do more . . . things in the weekends. I suppose my time has become more precious . . . The thing about tramping is that you tend to be away for that whole time and it's OK when the weather is good, and you can do a lot, but there's a lot of dead time. The great thing about mountain-biking is that you can go away and do a day's mountain-biking and you can come back and go windsurfing or go for a walk so you can cram a lot in. Mountain-biking is quite an intense sort of thing. I mean you can go out and do an equivalent of what would take you two days in a day's trip. People can cover about twice the ground.

Similarly, Anne said;

. . . you can go further on a mountain-bike in a day than you can walking . . . if you've only got a day, you can't do your favourite tramping trip which takes two days, however, you can bike it because you can go that much further.

And Maria;

you can get up on a Saturday morning and do everything else and then go mountain biking for the rest of the day and you can cover good distances. I tend to ride harder and shorter than I would if I go tramping - go out, have a hoot and come home!

In New Zealand, as in the United States, it appears that technology and restructuring have changed people's work experiences. Technology such as computers have allowed us to do more in less time, while restructuring and the drive for economic efficiency in

the workplace is demanding the same of any employee. These values are flowing over into people's leisure worlds, as illustrated by the above statements, and by Goodale and Godbey (1988).

Taking a wider view, while this new achievement-oriented approach could reflect the values espoused in the workplace, it could also be seen as a reaction to a lack of achievement and autonomy there. In other words, time deepening could be seen either as a form of compensation for, or an extension of, one's work as described by Parker (1971).

4.2.9.4 Time Deepening and Postmodern Analyses

Rojek (1993) suggests that the media and commercialisation have influenced people's approach to leisure. Postmodernist analyses see the modern world as increasingly fragmented and meaningless as a result of the increasing pace of life and the commodification of leisure and other forms of human experience (Britton, 1991; Jameson, 1984). This meaninglessness results in people looking for more and more intensity in their experiences.

Time deepening fits into this analysis, as does mountain-biking, which offers a fast, physically intense form of outdoor activity. Its popularity appears to be a product of people's desire to do more, go further and move faster. Furthermore, mountain-bikers are more likely to participate in a range of outdoor activities requiring a range of outdoor commodities than walkers, who do not appear so troubled by a lack of time in which to fit everything.

For recreation managers, this phenomenon may be of some concern as it has implications on the demand of future recreation resources. With further research, it may offer some insights into current changes in demand. It appears that back country areas in national parks are getting less use now than they did a decade ago, and use is changing; for

example, the Coast to Coast and other similar races are now run through Arthur's Pass National Park (Simpson, Pers. Comm., 1992; Espiner, Pers. Comm., 1994). The success of the *Coast to Coast* can be interpreted as a reflection of the desire of some trampers to intensify their physical challenges as well as to achieve more in less time. If so, these *faster, fitter, more achievement-oriented* recreation styles will increase in popularity.

What is uncertain is how today's lifestyles will change participation in the older age groups in the future. It appears that there may either be a backlash, where older people return to more leisurely recreational occupations, or that recreation in the older age groups will change to be more physically active than at present.

4.2.10 SUBSTITUTION

As a direct result of economic and time constraints, mountain-biking is seen by many as a substitute for a range of activities including tramping, climbing, kayaking and windsurfing. Mountain-biking allows people to use accessible, easy walking country to do a challenging activity. This was particularly the case for the group of bikers who were also active trampers. It was also seen as a useful substitute for activities such as windsurfing which require specific weather conditions.

Most bikers felt that they would not walk in the same places that they use for biking, in spite of being keen trampers. The reasons most commonly given were that they were too boring or not physically challenging enough (one or two bikers thought that they might start walking some of these tracks as they got older). Anne mentioned in her discussion of biking the Heaphy Track that;

I think along the tops I'd get bored probably, if I was walking because it goes on for quite some time over the Downs.

Bikers who were also keen trampers tended to tramp in more inaccessible, challenging places, such as in wilderness areas in national parks. As Philippa, a keen biker and tramper in her 30s, commented;

The ultimate for me is being in the remoter areas and being on the tops . . . tramping for me is like pushing out onto the tops - just working your way up a

valley, seeing the vegetation change and then the streams and then pushing onto the tops and camping out.

And Paul;

tramping tends to be not using tracks . . . a lot of cruising on the tops and high passes.

Overall, if a track is rideable, then, for keen bikers who also tramp, it is not a satisfying walk. Using a mountain-bike thus intensifies the experience of using outdoor areas, which means many bikers ride in areas that they would not otherwise use if they were restricted to walking.

In comparison, non-bikers preferred more accessible places with well formed tracks. At the same time, as the quotes in the previous section imply, many trampers felt they would like to bike in some of the places they had walked, especially if they found well developed, gently graded tracks. Unfortunately, these types of track are the same ones that non-biker groups preferred for their walking. High-use peri-urban areas, like the Port Hills, where there are many well-graded tracks are, therefore, also the areas that bikers feel they would like to use. Additionally, as noted earlier, any problems of incompatibility are magnified by a concomitant increase in user numbers.

4.2.10.1 Implications for Further Research

Brunson and Shelby (1993: 73) note that substitution has been viewed *in a momentary context*. Its use is seen in terms of the unavailability of a resource and the need to redirect people to different places and activities as a result. Iso-Ahola (1986) for example, in his theory of substitution, discusses when recreationists will be more willing to substitute one activity for another.

In reality, as individuals become constrained in various ways, for example through lack of time, lack of money, or even lack of fitness, they automatically substitute one form of recreation for another. The surprising thing here is that the activities seem to need a similar level of challenge but they may not have the same motivations. For active

backcountry trampers, mountain-biking is more physically intense but perhaps less satisfying in terms of the quality of the resource which is in use. It appears, therefore, that one activity focus has been substituted for another in the different activities. It may be fruitful to research how individuals weigh up the relative importance of different satisfactions. This research would also give insights into how expectations affect recreational experiences.

Shelby and Vaske (1991) suggest that substitution can be classified according to whether it involves a change of resource or a change of

activity. Figure 13 illustrates

their ideas. When

substitution is seen in

isolation from the context of

constraints and change, these

typologies are fine. However,

in the case of activities such

as tramping, changing the

quality of the resource

requires a change in activity, or in the focus of the activity, if the recreationist is going to be satisfied.

		Resource	
		Same	Different
Activity	Same	Temporal/ Strategic Substitute	Resource Substitute
	Different	Activity Substitute	Resource & Activity Substitute

Figure 13: Substitution Types (from Shelby and Vaske, 1991: 23)

This study also found evidence of temporal, or strategic substitution, where mountain-bikers ride at off-peak times on the Port Hills, activity substitution for example when mountain-biking is substituted for walking in the same resource, and in one case, resource substitution, where respondents mentioned that they only go to some of their favourite West Coast areas if the weather looks as if it will be alright, otherwise they use areas on the eastern side of the South Island.

Three of the suggested cases in Figure 13 involve perceived constraints by the individuals. Therefore, as Brunson and Shelby (1993) suggest, there is ample room to study substitution in the context of a range of constraints from the perspective of recreationists rather than viewing it only from a management perspective. This study indicates that life cycle changes, economic constraints, time constraints and constraining weather conditions all impact on people's decisions to substitute one activity for another. Following the line of logic above, it seems that walking may also be used as a substitute for mountain-biking if individuals feel constrained by their physical fitness, for example through sickness or age.

In summary, substitution should not be seen as an unusual process, nor only as a tool that managers might use to manipulate people, as doing so limits our potential understanding of the process. Instead it is more logical to treat as an integral part of the way individuals cope with life changes and changes in the resources that they use for recreation.

4.2.11 MOUNTAIN-BIKING AND SPECIALISATION

In spite of the large number of people who use mountain-biking as a substitute for a range of other outdoor activities, there were a small number of bikers who could be considered specialised. These people often (but not always) worked in the cycle industry. Additionally, many non-work hours were spent involved in the activity, whether through riding, working on the bikes, or helping others in their participation in the sport. Around five of my interviewees noted that they had very few friends who did not mountain-bike. These individuals had an intimate knowledge of the different kinds of mountain-bikes, they spent many weekday evenings riding their bikes, and their weekends and holidays were spent riding either competitively or recreationally. Mountain-biking is popular because, it is both suitable in a substitute role, and it also lends itself well to specialisation.

It is difficult to know whether today's mountain-biking specialists will continue their involvement throughout their life cycle in the same way as the fishers on whom Bryan (1977; 1979) based his ideas about specialisation. The difficulty with applying Bryan's ideas to physically strenuous activities is that they do not take account of the general decrease in fitness that older people experience. Neither does specialisation take account of younger people who, through work or family commitments, are not able to maintain high levels of physical fitness. In the case of fishing, it is relatively easy to return to a specialised form of fishing after one retires or has finished bringing up a family, but this pattern may not be possible in the case of strenuous activities. Of course, it is possible that tomorrow's retirees will be fitter and healthier than those of today, in the same way as retired people are considered to be fitter than their counterparts of 20 years ago. As noted earlier in the chapter, continued involvement in mountain-biking will be more possible if there are adequate opportunities for easier rides.

4.2.12 SECTION SUMMARY

Peri-urban areas have become more popular in recent years because people lacking money or time, are unable to go further afield. Mountain-biking, a new form of technology, provides an ideal means for people to use this *easier country* in a way that satisfies their need for physical challenges. Not only has biking *changed* the use of frontcountry areas, it has *increased* that use, as a result of some individuals substituting peri-urban areas for areas further from home. At the same time, individuals who have become specialised mountain-bikers also use these areas as training grounds when work commitments prevent access to more distant areas.

Economic and political factors have had a direct effect on the development of conflict, having influenced both the amount and type of use that frontcountry areas get. Changes in work habits, priorities, the influence of advertising media and the market economy have directly impacted on leisure choices. The drive for efficiency in the workplace seems to be overflowing into the leisure arena, and some parts of society now find

themselves trying to fit more activities into their limited leisure hours. This trend is that short bursts of intense activity are becoming favoured over longer, more sustained activities. These changes provide the backdrop against which conflict between mountain-bikers and trampers has developed.

4.3 MICROSOCIOLOGICAL FACTORS

Microsociological factors include the more subjective factors that contribute to conflict, such as the attitudes, opinions and feelings of agents involved in the conflict process.

The next section explores how bikers and trampers see the situation and what influences these perceptions.

4.3.1 THE EXISTENCE OF CONFLICT

As a group, walkers dislike meeting mountain-bikes on tramping tracks. Figure 14, Figure 15 and Figure 16 show how mountain-bikers, and walkers who do not mountain-bike, feel about meeting others on tracks. It is worth comparing the figures to see the increasing number of walkers who actively dislike meeting runners and bikers. Walkers appear to have little impact on other users, runners have more impact on walkers, and bikers are *disliked* or *strongly disliked* by 65 per cent of tramper-only respondents.

Some bikers deny the existence of conflict. From the interview data, it appears that males and females differ in their stated opinions on the extent of conflict. The male mountain-bikers I interviewed, who often went mountain-biking, all said that 99 per cent of walkers were *quite happy* and presented no problem. This may be because few walkers make negative comments when face to face with a biker.

Adelman *et al.* (1982) recorded a similar phenomenon when they found that motorised boat users were unaware of the antagonism that canoeists felt whenever the two groups met. Investigation showed that canoeists who felt strongly negative did not express it

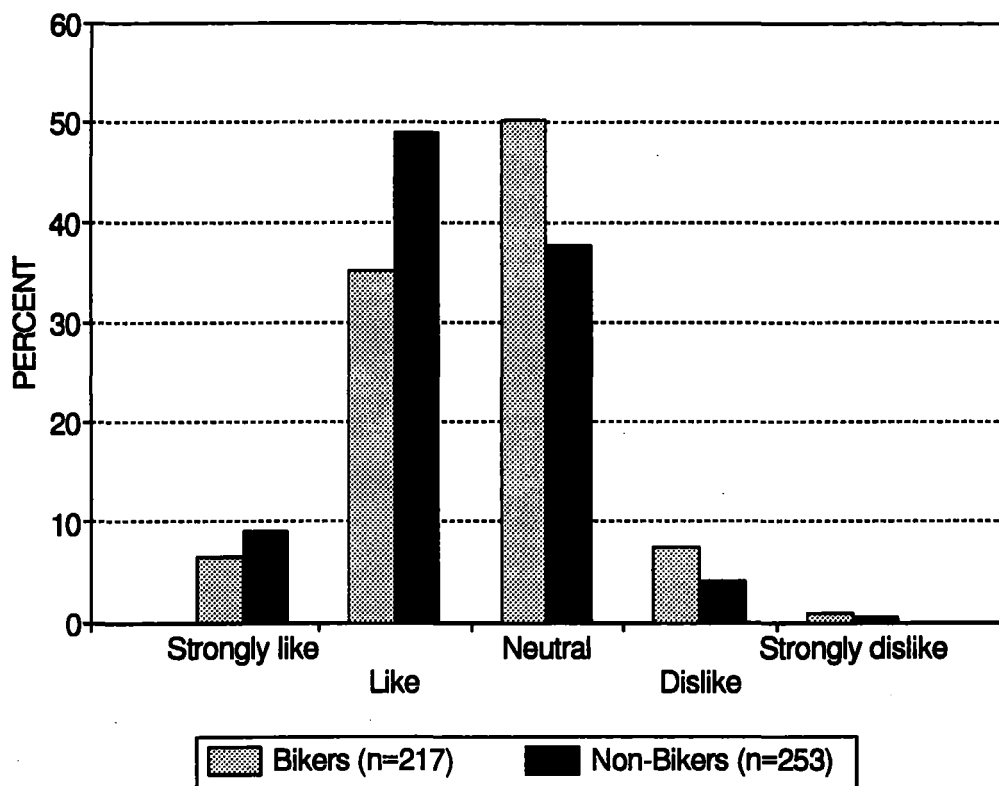


Figure 14: Feelings about Meeting Walkers

during encounters with motorboaters. In fact, they often smiled, reinforcing the boaters' views that there was little conflict. This reluctance to confront a disliked group may result from feeling powerless in the situation, combined with a desire to keep the meeting as stress free as possible. One or two walkers, for example, commented that it was not worth the stress of confronting mountain-bikers, because it only served to ruin their own enjoyment more than if they had ignored the presence of the bikes.

The interview data indicate that female bikers are more often aware of walkers' negative feelings, however it may be that women are just more inclined to admit the existence of a problem. Anne mentioned that she found it uncomfortable to meet walkers on tracks;

I suppose I'm on the defensive when I run into people somewhere because I think I'm about to get a barrage of [verbal abuse] . . . - and if people don't [say anything], I think "phew" and tootle on my way.

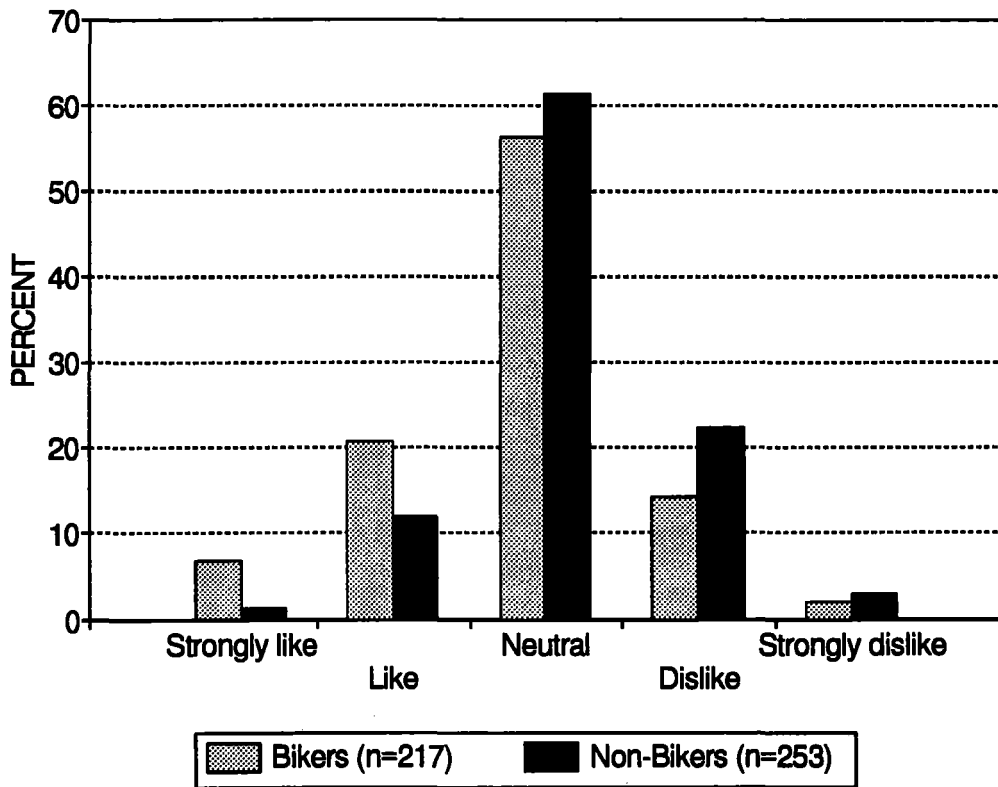


Figure 15: Feelings about Meeting Runners

4.3.1.2 Strategies

Both sexes have strategies for defusing the conflict situation before it occurs, indicating that most bikers *are* actually aware of the negative feelings of walkers. Jo, for example, said she had sometimes *struck trouble* but:

... I just stop and have a chat - I saw some people the other day when I fell off ... so I just stopped and had a chat - I think it's the way you approach them.

Similarly, Paul, who felt there was little *real* conflict, said;

The walkers I've come across have always been fairly good towards us - we'll always stop and let them through - that's one of the mountain-bike codes ... some of them will stop and want to know all about your bike and what the sport is all about.

Karen felt that it was a good idea to get the first word in to prevent the conversation starting on a negative;

we try to disarm any anger that they might have by greeting them with cheery smiles and immediately talking about what a great day and what a great time

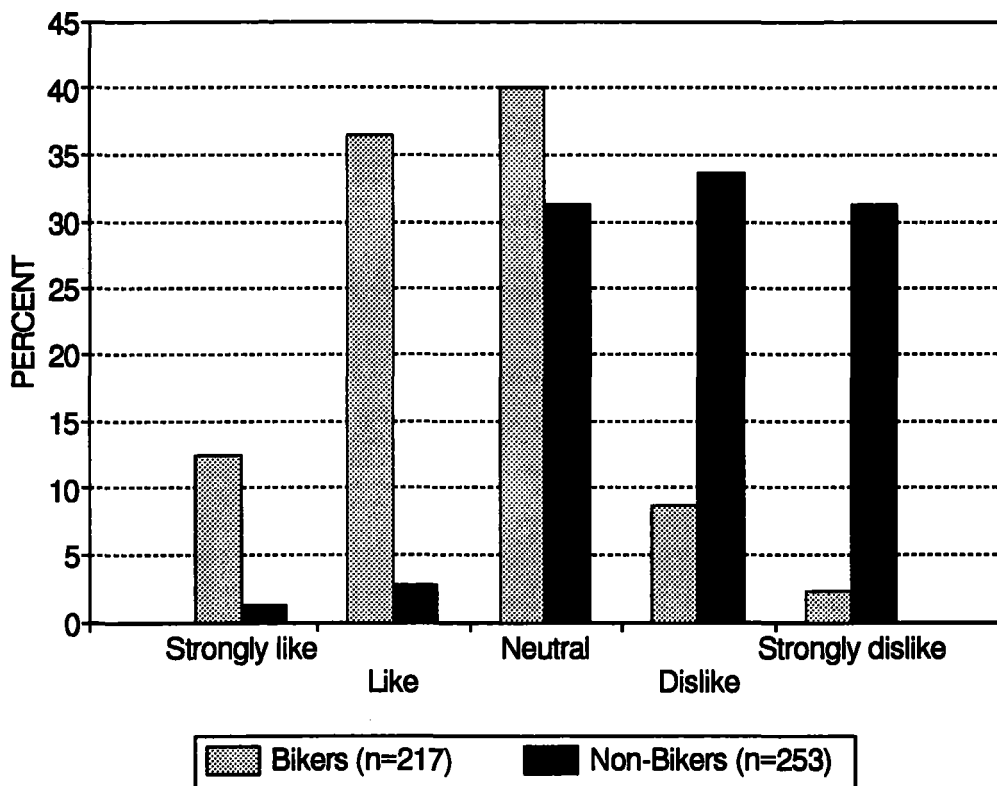


Figure 16: Feelings about Meeting Bikers

everybody is having.

Some bikers even try to divert attention from their bikes by suggesting that something else is more important;

... sometimes when I'm accosted over my bike I say, 'well actually, the bike's OK - it's the dog you should be objecting to!'

4.3.2 WHO HATES WHOM?

According to data from both the questionnaires and the interviews, a range of user-groups are impacting on each other. For example runners have a negative impact on walkers as illustrated by the comments of the ranger at the Sign of the Kiwi on the Port Hills, near Christchurch;

The walkers used to complain about the runners but now the runners take a back seat, and the runners are taking the same view as the walkers [about bikers].

Another comment that was made in one form or another by everyone I spoke to and by many questionnaire respondents;

At least mountain-biking is better than mountain motor biking.

While walkers dislike meeting mountain-bikers on tracks, mountain-bikers dislike riding amongst fast moving cars or motor bikes. Paul, when asked what he thought of four wheel drive tracks, said;

Well, they're OK, but they have the problem that they have four wheel drive [vehicles] on them. I had an interesting incident on the Bridle Path the other day with some sort of beach buggy going at high speed. He just came flying round the corner coming up from Lyttelton and I looked behind me and thought "hmmmm, well there's no room for him and me, and he's bigger than me and he's not going to stop," so I had to ride off the edge.

So, for many riders, four wheel drive tracks are not good places to ride because there are motor vehicles on them. Bikers' comments about four wheel drives and motor bikes sound very similar to the comments many walkers make about mountain-bikes. For example, mountain-bikers noted in their questionnaires:

I hate meeting motorised vehicles. They are noisy and users usually show little consideration for others, and flora and fauna;

sometimes four wheel drives can be a bit of a pain as I constantly have to move out of their way, and motorbikes tend to speed;

and trampers wrote of mountain-bikers:

They destroy the peaceful atmosphere and tear up the tracks;

. . . it does seem if you are walking you are expected to move for bikers and often have no choice.

These quotes provide support for the ideas of Devall and Harry (1981) and Bury *et al.* (1983) as outlined in Chapter 2, however they still do not present any causal link between mechanisation and conflict.

4.3.3 PERCEPTIONS OF DIFFERENCE

Research on crowding has shown that groups that are perceived as different are likely to be considered more intrusive than groups who are perceived as similar to that of the recreationist. Intuitively, it is easy to be tolerant of people if one identifies with them in

some way. This point is illustrated by one of my tramper-only interviewees who liked meeting joggers (contrary to other walkers), in spite of having to move out of their way.

He added that;

because I'm a jogger myself, I get out of their road and I'm quite happy with joggers really.

Similarly, a male I spoke to (who had a mountain-bike) commented that he had been annoyed by the sight of mountain-bikers on Godley Head until he realised that *he* could be mountain-biking there one day. Perceived differences in age, dress and demeanour will all contribute to the distance people put between themselves and others in a meeting situation.

One respondent (a biker and tramper) spoke of the insect-like appearance of bikers when they are attired in helmet, glasses, lycra clothing and gloves. While few walkers talked of mountain-bikers' attire negatively, they often noted the differences between their own dress and that of the mountain-bikers they had met. The role of dress in perception of difference was also highlighted when one respondent spoke of the change in the participants in the Coast to Coast event over the last 10 years. His comment was that the original competitors had been dressed in *rugby shorts and woolly singlets*, while the present competitors were dressed, somewhat differently, in colourful lycra outfits. The change in dress gave the impression that the competitors had changed from being experienced in tramping to being specialised in multisport events and less experienced in the backcountry. This observation indicates that individuals dressed this way are being categorised as inexperienced backcountry users, regardless of their actual experience.

However, the idea that backcountry users are changing was reinforced when other respondents commented that tramping was no longer the first outdoor activity that people tried. Nowadays people can take up a range of sports to begin their outdoor interests, and activities such as mountain-biking, which utilise peri-urban areas, will be the most likely starting activities.

4.3.4 ENVY

It is also possible that there is an element of envy associated with these perceptions of difference. No walker interviewees spoke openly of being envious of runners and bikers who are physically fitter, however, a number compared themselves with runners in particular. One or two questionnaire respondents commented that they envy the fitness of bikers and runners, for example, a male in his 50's commented;

While I envy the fitness of runners in remote areas, it seems to me that they are taking unnecessary risks and seem to be rushing through an area without really enjoying it.

Walkers who know that they are capable of running or biking in an area are less likely to feel inferior in any way when they meet a runner or biker. For some walkers, therefore, it seems possible that the sight of users, who appear physically fitter, may impact on their leisure experience.

4.3.5 FEELINGS OF THREAT

Both mountain-bikers and walkers feel threatened. Mountain-bikers feel that their recreation will become so restricted that it will be difficult to find somewhere to ride legally. In comparison, walkers feel that mountain-bikers are going to take over the outdoors so there will be nowhere for them to go to *get away from it all*. In general, those individuals in both groups who are heavily involved in their activity feel the most threatened.

4.3.6 TRADITION

Walking has long been a traditional use for outdoor areas and mountain-biking is a mechanical newcomer. A female interviewee mentioned that because bikers are newcomers, they have to prove themselves and make every effort to be more courteous and careful than most trampers.

Because mountain-bikers are moving into areas that have traditionally been trampers' areas, I feel we have to make a real effort to go overboard and be friendly, stop and talk to them . . . It's a little bit like the way I feel even being a

female in business or a female in sport - you have to prove yourself so much harder to be accepted on the same level.

4.3.7 IMAGE

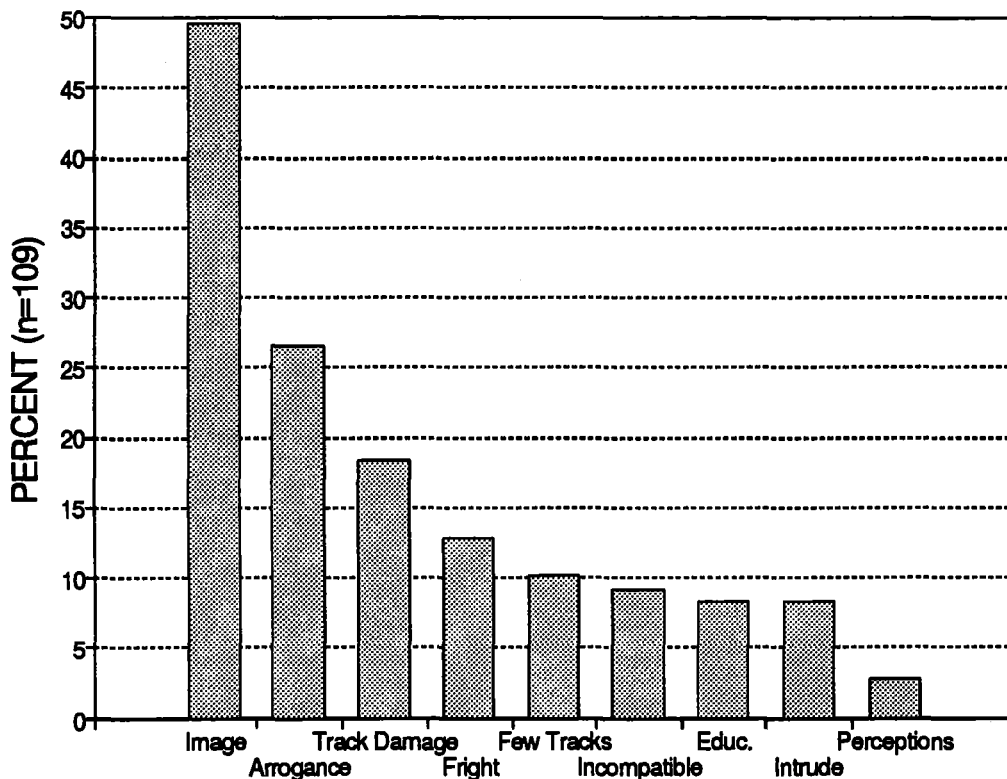


Figure 17: What Bikers think Trampers Dislike About Mountain-Biking.

Many bikers feel that trampers have labelled them as *hoons* (people who ride at high speed with little regard for other users or for the environment) because of the behaviour of a few irresponsible bikers. This perception can also make meeting walkers uncomfortable, as one respondent noted in his questionnaire:

In referring to walking tracks I dislike meeting walkers because I'm embarrassed to be viewed as a 'hoon'.

As Figure 17 shows, 49 per cent of mountain-bikers who answered question 17 (see appendix) felt that mountain-biking's bad image was the biggest problem in the conflict between mountain-bikers and trampers. This bad image was blamed on irresponsible bikers and on the way the media and advertisers portray mountain-biking.

4.3.7.1 Media Image

The media paint mountain-biking as a fast, exciting sport and, until recently, many mountain-bike magazines used action shots with bikers flying through the air, speeding or skidding through mud. Racing is the aspect of mountain-biking that gives best viewing for television and that tends to show similar images. In neither case are bikers seen carrying anything in the way of emergency gear. Inexperienced bikers with only these images to guide them are unlikely to think of the possible hazards that they might meet, nor the damage that they might do to the places they are visiting. Neither do these images help the overall impression that members of the public have of mountain-bikers. It appears that mountain-bike magazines are changing as a result of criticism from their readers, who now find these images a political disadvantage.

In all cases, interviewed biker respondents maintained that it is not the *serious* bikers that are causing problems on walking tracks. It appears from my observations, that most experienced riders train in peri-urban areas, but they train after work in the late evening or in the early mornings when there are few people around. Their recreational rides are usually further afield. Therefore, the less experienced riders, who ride at busy times, and are least aware of their impact on walkers, are also the ones that walkers meet most often.

4.3.7.2 Combatting the Bad Image

Much of this kind of riding is attributed to adolescent boys who may be a significant part of the conflict problem, if only because they do not have the resources to go further afield. Inexperienced riders have trouble getting information telling them where they can and cannot go and, until they make some contact with others in the sport, they are most likely to know only about the well known walking tracks. Education and information are, therefore, important factors in trying to manage the conflict. Both bikers and trampers agreed that education was the way to deal with the conflict, as does Coughlin

(1994). However, trampers felt that bikers needed education, while bikers felt that both bikers and trampers needed it! While education through schools may be possible, there are many slightly older riders who neither belong to a club, nor participate in races and so are difficult to reach. Anything aimed at trampers would most easily be done through clubs.

Some bikers are aware that they must encourage other bikers to be courteous to walkers they meet on tracks, and, for some older riders, their concerns are reflected in the way they deal with mountain-bikers who they feel are not riding responsibly.

K . . . *if I see . . . as I often come across young bikers who are hooning past - I'm quite vehement with them and on occasions I grab their bikes and stop them to talk to them, and tell them that I'm a mountain-biker too, and if they behave like that, more and more places will be closed to us - so I'm really quite stern about it!*

This remark provides some support for Heywood's (1993) ideas that individuals who are threatening the participation of the whole group by their disregard for agreed-on rules, are likely to be disciplined by that group so that new group norms develop.

Unfortunately, it seems that only a minority of bikers act to discipline others, which may have a bearing on the overall effectiveness of group sanctions. Group norms would be more likely to develop where bikers are members of clubs, but for bikers who do not think of themselves collectively, there is no incentive to abide by group norms.

4.3.8 TOLERANCE

In spite of the large number of walkers who dislike meeting bikers, many are tolerant of mountain-biking. One male in his 60s, a member of the Summit Road Society, went as far as to say;

I do think mountain-biking is a legitimate, active recreation, and I think that's where the whole trouble comes. It would be very nice to say "no, we don't want it" but when we looked into mountain-biking, we discovered that there is more than one type of mountain-biker. There's the person who rides the bike and enjoys the ride and the scenery, and there is the other person who can't find anything difficult enough . . .

At the same time, trampers are concerned at what bikes do to the environment and the experience of walking.

I would not like to exclude anybody from New Zealand's remote areas, but I cannot help feeling slightly negative to the growing use of mountain-bikes, motor bikes or 4 wheel drive vehicles to these areas. I appreciate it takes real physical effort to pedal mountain-bikes to these regions but in country where even foot traffic can have bad effects (in some parts) it seems to me that wheels will be worse . . . the feeling of wilderness can be totally destroyed by the presence of technology in many areas.

This comment illustrates concern with environmental and experiential impacts. Figure 18 shows the results from a question asking walkers to rank the two biggest problems with mountain-biking.

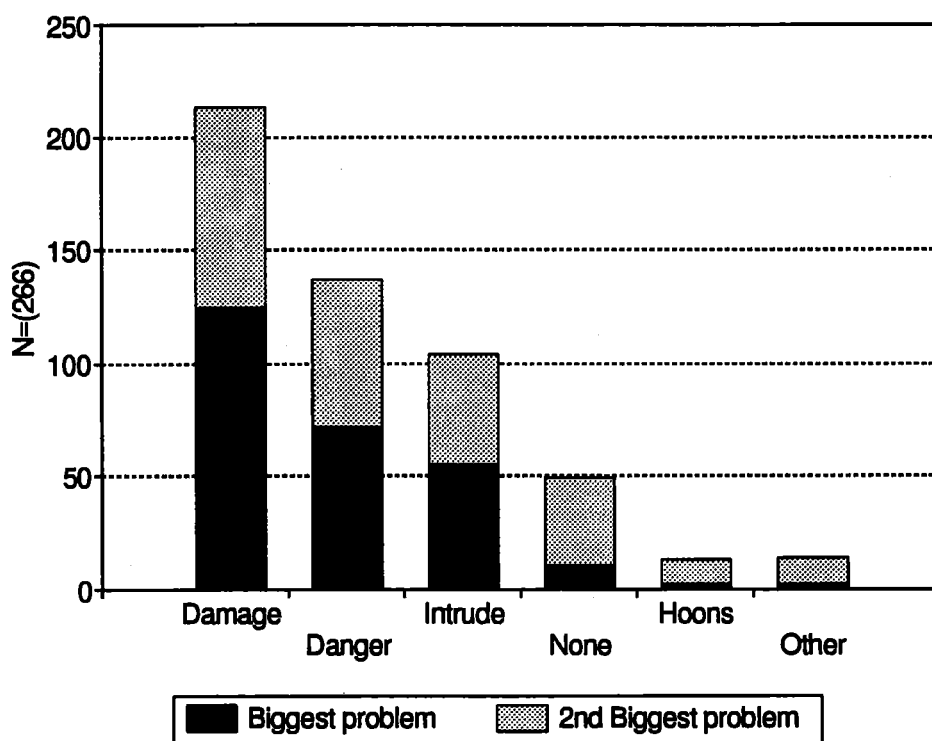


Figure 18: What Trampers Feel are the Problems with Mountain-Biking.

4.3.9 ENVIRONMENTAL ATTITUDES

Past research has found a difference in environmental attitudes between groups like snowmobilers and cross-country skiers (Jackson, 1989:111-112). More snowmobilers

were considered *technocentrist* in their attitudes, while skiers were five times more likely than snowmobilers to have attitudes *consistent with [a] pro-environmental position*.

In the case of mountain-bikers and trampers, this difference is not so obvious. Watson, Williams and Daigle (1991) found no significant difference between hikers and bikers in their membership of conservation organisations. My questionnaire data show that more trampers belong to conservation organisations (45 per cent of walker-only respondents belong to organisations such as Forest and Bird, the Summit Road Society, Maruia Society or Greenpeace, whereas 36 per cent of bikers belong to similar organisations). This difference is significant to a level of 95 per cent confidence (Pearson's rho = 0.0432). However, the difference is less significant in the context of the age gap between the two groups and the changing age structure of clubs that I discussed earlier. A few teenaged mountain-bike respondents who were not members themselves noted, for example, that their parents belong to these organisations.

My interview data also indicate that bikers and trampers are similar in their attitudes towards the environment. Many bikers for example felt that mountain-biking required less use of a motor vehicle, and was, therefore, a more environmentally friendly activity than driving up onto the Port Hills to go for a walk. Seventy nine per cent of biker questionnaire respondents use their bikes for commuting and many bikers spontaneously mentioned their concern for the environment and frequent reference was made to biking as the *most efficient form of movement on the planet*.

As Figure 18 shows, most tramper respondents were very concerned with the damage to tracks and the surrounding areas. There are many arguments about the impacts bikes have on walking tracks. In certain conditions, it seems that bikes can leave distinctive tracks and ruts, which deepen as water erodes them further. Bikes ridden in wet conditions, where bare soil is the basis of the track, cause extensive damage. This

damage could be lessened by constructing tracks with good surfaces and frequent water bars. Nonetheless, walkers are upset, by the ruts that are forming on many tracks in the Port Hills. They also feel that bikers are damaging flora and fauna in the vicinity of the track and that the areas in question are too *fragile*, and too valuable to be used by mountain-bikers in what they feel is an uncaring fashion. This perception detracts from the experience and is linked to the motivations or foci that people have for their different activities.

4.3.10 Focus

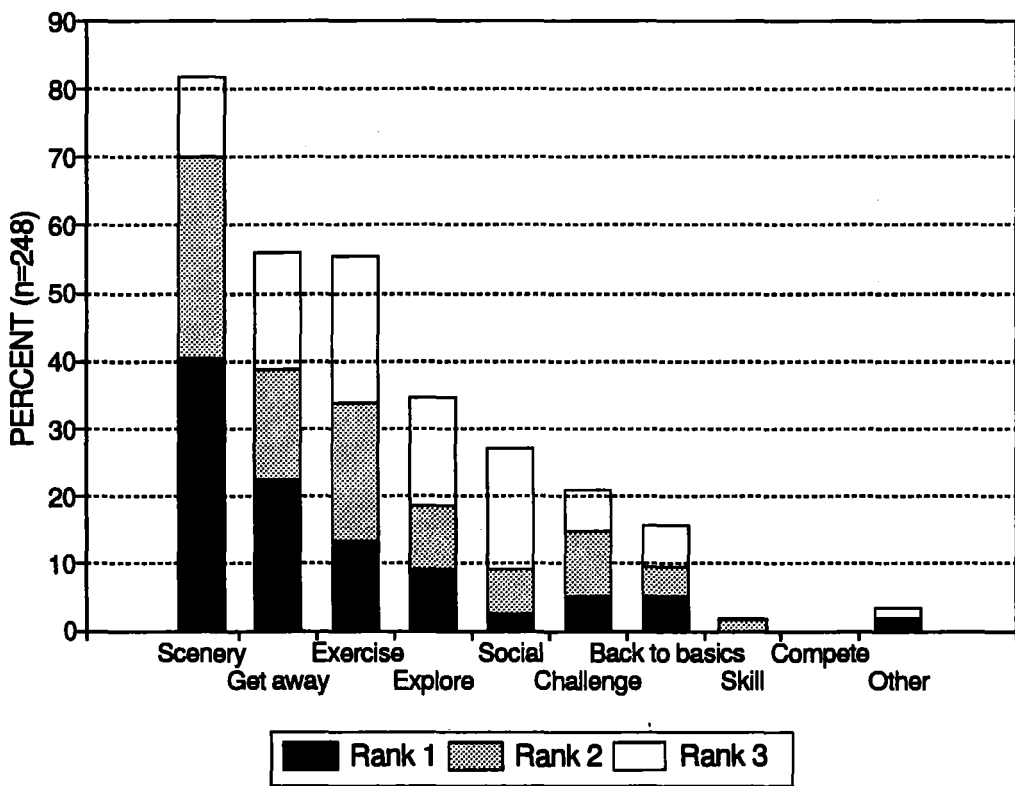


Figure 19: Trumper's Motivations for Tramping.

There are individual differences in reported motivations for biking. Just as in tramping, people approach mountain-biking in a variety of ways: some are competitive and look for challenge, while others go out purely to get into the outdoors and appreciate nature. That each individual has her/his own set of preferences and motivations for recreational riding

was illustrated by one couple who spoke of a *recipe* of factors that make outdoor recreation enjoyable for them.

Part of the recipe that we're talking about is going under your own steam and using up a bit of energy in a nice environment.

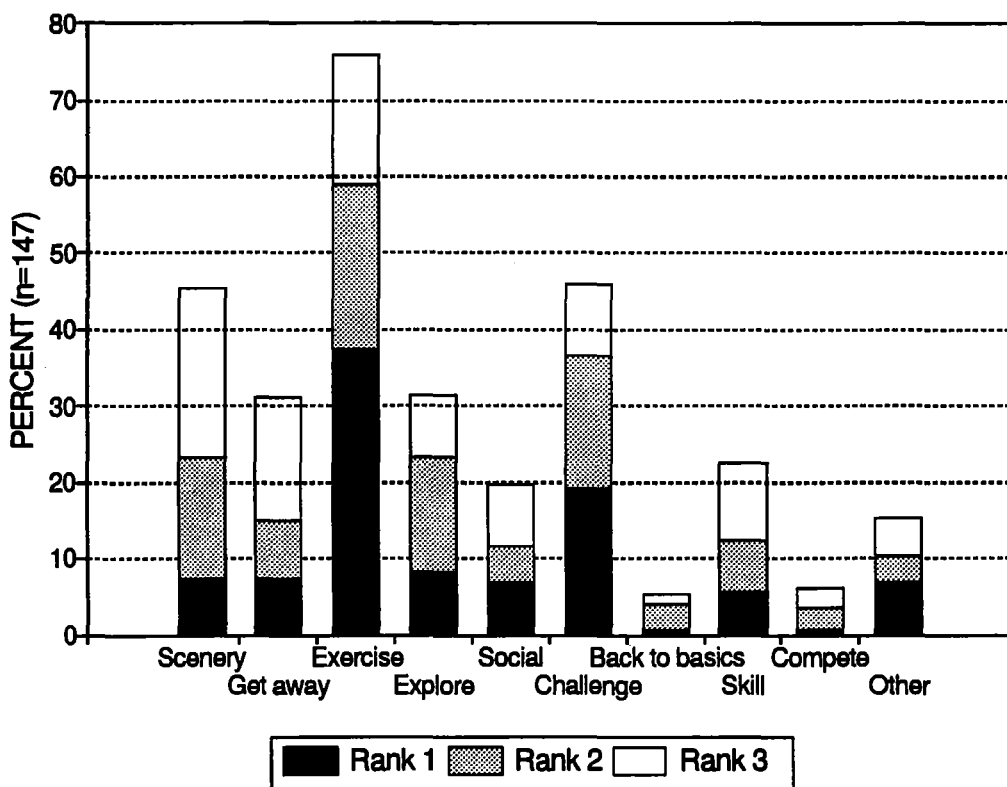


Figure 20: Motivations for Mountain-Biking.

Individuals may also differ in their motivations between rides. Each person has a set of motivations that can be adapted to optimise the opportunities and resources available to them at the time. Individuals may have different motivations for mountain-biking at different times, depending on the group they are with and how they feel at the time.

... if you feel like going slow and stopping and looking at the scenery then you can and if you feel like pushing yourself hard you can really have a hard work-out. And that's the same as tramping where you can put your head down and go for it.

Many respondents indicated that their motivations are influenced by the people or group with whom they go biking. The role of the group is also important in tramping.

Experienced trampers go on easier, more social trips with friends who are less

experienced than themselves, and go on more challenging trips with friends who are experienced (Barker, 1989).

Overall, however, motivations for tramping and walking differ as indicated by the varying patterns in Figure 19 and Figure 20. The most important focus for trampers was to enjoy beautiful scenery (82 per cent considered this option one of their three main reasons for tramping), while, for bikers, physical exercise is the most frequently checked option.

4.3.10.1 Physical Fitness

Mountain-bikers are concerned with their physical fitness. Some bikers train two hours a day during the week and race or do long training rides at weekends. Others go out occasionally when they have been unable to do other favourite activities. In all cases, people who ride mountain-bikes off-road are physically very fit and mountain-biking is often cited as a good way to keep fit. Physical exercise is also ranked highly as a motivation for tramping.

4.3.10.2 Excitement / Thrills

Many people (both bikers and non-bikers) mentioned a *fun factor* in mountain-biking. One mountain-biker described mountain-biking as a *drug*. The drug is the speed that is reached going downhill. For Mary, mountain-biking was the first physical activity that she had ever done. When a close friend introduced her to mountain-biking, she loved speeding downhill and, from there, her involvement grew:

I used to hate it - I used to have this love - hate thing. I used to love it when I got to the top, and when I was going downhill, but going up . . . it was so hard. But now I really just love it. I've got a new bike and even when I'm going uphill I really enjoy it.

About ten mountain-bikers added *for the thrill* to the bottom of their list of motivations and ranked it as one of their three main reasons for mountain-biking. Had this been one of the supplied answers, it may have figured more prominently in the data. Interviewees,

like the two above, often mentioned thrills and excitement as an important part of mountain-biking.

Excitement stems from the sensation of speed and the adrenalin rush that the danger inspires. The danger is very real. One respondent spent a week in hospital after a crash. While the risk is not at the same level that might be attributed to some alpine climbing, it provides a range of *thrill levels*.

4.3.10.3 Challenge and Skill

Overcoming technical challenges can also be exciting in itself as Jo indicated:

. . . to me it's when I'm coming up to something and it's steep and I get down it . . . and you've got to hang right off the back and you're really on the brakes, and that to me is a buzz and I get all excited about it!

Mountain-biking provides for challenge at many levels. What is challenging for one person may go unnoticed by others a fact that is reflected in the organisation of the New Zealand race series. Mary, a novice, feels challenged to compete in a higher race class in the next season, or to make herself ride to the top of the hill without stopping on her training run. Riders who have been mountain-biking for a few years, might have their sights set on the world championships or a particularly difficult technique, like riding down steep hill sides or over large rocks. People most enjoy the level of riding that challenges them personally. Mary described her experience trying to get up the courage to get over a rock that she had previously found impossible to bike over:

I kept going up to it and stopping and going back. Last time I thought 'OK I'm going to do it', and I went over it . . . and I did it and then I kept wanting to do it - and the smile on my face. I've never been so happy in my whole life.

Challenges thus provide feelings of personal satisfaction and achievement when they are overcome.

4.3.10.4 Flow

There are obvious elements of Csikszentmihalyi's flow experiences coming through in the descriptions of the respondents above. Both tramping and mountain biking are good

flow activities (that is, activities that produce flow experiences). For trampers, flow might arise from the overwhelming impact of the natural environment, the physical effort required, or the social interaction with companions. There is also much enjoyment in the feeling of freedom gained from being in the outdoors, away from the pressures of living in the city, and from learning about aspects of the environment. Mountain-biking seems to offer a higher level of physical challenge to those who are fit and enjoy the challenge of learning new skills, as well as many opportunities for more appreciative experiences.

The myriad of technical moves, the thrills, and the physical challenges associated with mountain-biking make it an activity that lends itself to the *flow* experience. Riders are always riding to improve and extend their boundaries and the boundaries appear to be limitless, as George commented.

. . . because our fitness level and our skill level keep going up, we're now doing, in a day, what we used to do in two . . . when the skill level comes up, they become rideable and they become enjoyable. I've got a friend and he's doing things and riding sections of track that people wouldn't think you could ride . . .

For those bikers who are not trampers, the focus of mountain-biking even on a recreational ride is strongly centred around improving technique and enjoying the company of others. Many are as happy riding through pine trees as bush, suggesting that the physical challenges of the surroundings are more important than their aesthetic qualities.

4.3.10.5 Mode of Experience

In general, most tramper-only respondents had a *setting focus*, whereas bikers generally had an *activity focus*. Some of the differences in the samples may reflect the different ages of the two groups. However, the interview data indicate that people, who both tramp and mountain-bike, have a slightly different set of motivations for each activity. Paul, for example, enjoyed tramping for;

getting into the mountains and getting away from all the hassles of city life and the fact that you're in beautiful scenery and it's a neat feeling of achievement, getting some place and . . . the primeval aspect of getting back to the basic things of food, shelter and warmth . . . and also it is a very social thing.

In comparison, he said;

. . . mountain-biking is a very physical, cardiovascular sport and that's good because it's good for training. But the other great thing is that it's got an amazing sensation of speed and there's quite a lot of skill required, so it's a sport that combines quite a lot of things. It reminds me in a lot of ways of . . . the downhill bits of skiing [amongst] trees overseas . . . it's really that combination of eye and judgement and body coordination plus the fitness aspect.

Similarly, Karen said;

I'll often go to the same place on a bike and tramping and they're such totally different experiences. The bike experience is exciting and dangerous and it's the thrill of the moment and you don't really have much time to appreciate the surroundings except in as much as they provide obstacles which you need to preserve your life over . . . whereas for tramping there is . . . that sense of peace and tranquillity that you get from being in the bush . . .

Additionally, most interview respondents indicated that their motivations for biking were many and varied. While mountain-biking causes them to interact differently with the environment, their surroundings are still very important. Karen, a regular tramper, after commenting that biking made her see the bush as a contest, said:

. . . on the other hand, I like to be in the bush or I like to be where there's a pleasant outlook and a nasty four wheel drive track through interminable farm country doesn't appeal to me at all.

Bob also felt that surroundings were important and that being relegated to gravel roads and four wheel drive tracks was unacceptable:

I get very agitated when people start advocating four wheel drive roads and what is second rate country. Sure if part of what we have to ride on is all conifers and exotic plantations - fine- but we will not lie down and let people deny us areas like the Heaphy . . . 'There are thousands of kilometres of gravel roads in New Zealand': I reckon most of that comes from people that haven't done much cycling.

4.3.10.6 Appreciation

A few bikers have a distinct setting focus. For Tracey, an older rider, her bike was a way to enjoy the natural environment, the bush and the views that she came across *en route*:

I stop and look and appreciate the bush and the birds . . . I could be going round some bays and I come to a lovely lookout and I'll just stop and look; or I see this neat patch of bush and I get a bit closer and realise it's a reserve. I tie up the bike and go and have a look in the reserve, so my mountain-biking is sometimes a

means to an end to get to locations but certainly it's a way of appreciating the nice environment . . .

The sentiments of this woman indicate that people can adopt an appreciative approach to mountain-biking. While trampers and bikers differ significantly in their focus at present, the interview data indicate that this interpretation may be complicated by the age differences between the two populations.

4.3.10.7 Changing Focus with Age and/or Experience

The age difference between the trumper and biker samples may be a factor in the significantly different motivations recorded between the two groups. Many older interview respondents noted a change in approach towards the outdoors over time. Experienced trampers in my sample noted that while they still enjoy challenging tramping and climbing trips, they can now equally enjoy easier trips where they focus on their surroundings at a more leisurely pace. This conversation that occurred during an interview with one couple illustrates the point;

A: I've done a lot of alpine tramping so now it doesn't worry me. I think it's just more to be out of town.

B: He's changed. I think you've reached the stage where not everything has to be a full-on trip and you can just go for recreation.

A: Yeh, I just like wandering around if it's in the hills: that can be on the Peninsula or anywhere. We're blessed with nice places in New Zealand - a lack of people and nice places.

From another interview;

So do you think there has been a change in your focus or motivation?

I think it has always been there but I've probably become more conscious of it. I think more deeply about it, so I guess the change that has occurred is just thinking about what it means to me.

Thus with age and/or experience (or possibly something of both), it seems that there is a shift of focus in the way individuals approach recreation over time.

4.3.11 PAST EXPERIENCE AND RELATIONSHIP TO PLACE

Some trampers mentioned that when they were younger, their focus was on covering country, walking faster or running down hills, thus their focus was similar to that of mountain-bikers. Sam described his past;

I used to do silly things like I'd run down hill sides and stuff, but I find I can't do it now and I don't think I would because it is a bit risky . . . you're on the limit - your senses are alert to everything . . . it's a full body experience . . . you've got to look at where you place your feet at least 3 or 4 steps ahead . . . you're really in the moment. I'm in my 30s now and I'm not as fit as I was in my teens or twenties. I have different goals - before I used to cover country - now I look more, I see the details more . . .

This change in awareness is similar to that recorded by Simmons and Devlin (1982) in their survey of recreational hunters. Hunters changed from focusing mainly on killing an animal when they first began, through to focusing more on the enjoyment of being in the outdoor environment. Thus, with experience, people move from what Jacob and Schreyer (1980) call an *activity focus*, through to a *setting focus*, or from Moore and Graefe's (1994) utility-oriented *place dependence* through to a more emotional *place identity*.

With experience and /or age people's relationship with recreational places changes to become more personalised, and perhaps, more caring. Of importance is the fact that people need to spend time interacting with a place to develop strong feelings about it.

As one respondent noted of the Port Hills:

well it's got personal associations, so there's a history there in a sense . . . my own history.

Without exception, the people that conveyed the strongest feelings about the Port Hills were those who had the longest associations with them. Charles a male in his 70s said of the Port Hills:

. . . to me it's sacred land you see. In my life time I lived in Lyttelton, I was brought up there [and] I can remember the Port Hills when the Summit Road wasn't there. It was just a walking track . . . and the road went in during the Depression . . . the patches of bush are beautiful . . . In the bluffs under Mount Pleasant, we used to play as kids. There's caves and tremendous fern life up there.

As with this person, those in the older age group have had a longer time to learn about the history, flora and fauna of the area. This knowledge, combined with the development of a personal history in the place, add up to a strong relationship with that place. This relationship may come from direct personal experience in the place, but it can also be mediated through the experiences and knowledge of other people. The following quote hints at this:

I remember when I was climbing at Mountain Cook when I was younger . . . I was there to do peaks; I mean I didn't even know it was a national park, but if somebody was to sit down with me and say, well . . . this is a beautiful place. Do you like being here? What is it about this place that you really like about it? Are you going to come back? Why are you going to come back? Those would have been triggers I think [to facilitate my awareness].

In addition, my own appreciation of the Port Hills grew substantially through exploring what they meant to my interviewees. However, in both cases, the individuals concerned had personally visited the areas in question.

In comparison, those with little or no experience *in the area* felt no such appreciation, regardless of age. One very experienced male outdoors enthusiast in his forties, who did not live in Christchurch (and so had spent little time on the Port Hills), said of the Port Hills:

. . . to me they're a barren sort of lump.

The role of experience in the development of a sense of place is important because so many mountain-bikers are young people who, by definition, do not have much personal history in any place. This development of place identity will only occur through interaction with that place, and, for many, the only interaction they get will be through mountain-biking. The difficulty lies in finding the balance between the use needed to develop this sense of place, and the use level that will eventually destroy the spirit of the place.

4.3.12 MODE OF EXPERIENCE AND CONFLICT

Jacob and Schreyer (1980) predicted that individuals with a setting focus (or a more affective sense of place) will be more prone to goal interference than those with an activity focus. As indicated in the following quote, this appears to be the case.

I don't mind [mountain-bikes] out in the open where you can rush across tracks and all the rest of it, but to me, to see mountain-bikes hooning through bush is almost sacrilege. I think if they want to go into the bush, they should walk through the bush so that they can enjoy the complexity and delicacy of it rather than just ride rough-shod over it.

Many walker-only respondents spoke similarly, indicating that even evidence of mountain-bikes in an area considered unsuitable for them, can impact on the recreational experiences of these people.

Bryan (1979) suggested that much conflict in the outdoors could be explained by differences in specialisation. He hypothesised that more specialised recreationists will be more sensitive to the quality of their recreation setting (or be more setting focused) and, therefore, will find it more difficult to satisfy their recreational needs. This hypothesis would be well supported if the tramping-only respondents were considered specialised recreationists. In fact, according to Bryan (1979) most of these individuals are unspecialised trampers because they seldom go tramping overnight and seldom venture off formed tracks. In comparison, it seems that many of the individuals that Bryan would consider more specialised trampers, are found riding mountain-bikes on the Port Hills, apparently with an activity focus.

4.3.13 SPECIALISATION

Specialisation theory appears to be of limited use in understanding conflict between mountain-bikers and trampers, however, with some modification, it can be made more so. Barker (1989) identified three factors that could be used to measure an individual's level

of specialisation. These were commitment (in terms of money, effort and competence); source of information; and experience. In the light of these findings, it appears that many frontcountry users may actually be as specialised or more specialised than the backcountry ones.

Many of the frontcountry users I spoke to spend much time on the Port Hills maintaining and building walking tracks, and working to improve access for other walkers. They are directly involved with setting aside land for conservation purposes. A tremendous amount of voluntary time goes into projects such as tree planting, or negotiating to buy land through the Summit Road Society. Additionally, these same people are often up walking and exploring the hills. Many of these individuals are retired and walking has become a central life interest. In short the commitment, knowledge and experience of these people makes them highly specialised in their own right. However, their specialisation is defined in relation to particular places (for example, the Port Hills) or types of places (for example, frontcountry areas).

4.3.14 SPECIALISATION INTO PLACE

Each of the three factors that Barker (1989) identified as measures of specialisation can be related to places. People may be committed to using the Port Hills, for example, but put little money or effort into visiting national parks. They may know much about the Port Hills and have had much experience there, but have little knowledge or experience in other places. Therefore, people can become specialised in the use of certain specific places, or even certain general *types* of place.

The same could be said of specialised backcountry users. For many backcountry specialists, frontcountry areas may have little value compared with backcountry areas. The frontcountry is a substitute or exercise area for those times when they cannot get

into their favourite places. To a backcountry trumper (or a tramping specialist as Bryan (1979) defines them), the frontcountry is less pristine, more crowded, and less challenging than, for example, a wilderness area in a national park. Because of its lower values, it is an appropriate place for mountain-biking or jogging; activities that focus less on the small things in an area. Trampers who bike focus on the scenery when they are tramping, but they are unlikely to use frontcountry areas for tramping. Instead they bike and focus more on getting exercise, or on learning new riding techniques.

In comparison, frontcountry specialists place a high value on frontcountry areas and feel that mountain-biking is highly inappropriate there. This sense of inappropriateness is reflected in many of the quotes throughout this paper and in the tone of the anti-mountain-bike lobby. Therefore, the different values that each group attributes to the resources that they share are, important factors in the conflict between the two groups.

It could be argued that backcountry specialists are still more specialised than frontcountry users (as Bryan suggests), as they have experience in the different types of resource, whereas frontcountry specialists only know the frontcountry. However, amongst my interview respondents and amongst those I spoke to informally, there were some individuals who had extensive experience in backcountry tramping, but who are now unable to participate in that mode because of physical fitness. As these people have aged, their ability to do physically difficult trips in the backcountry has decreased, so the frontcountry mode has been substituted over time. It appears that, they have adapted to this constraint by becoming frontcountry specialists. Overall, therefore, some frontcountry specialists may have had as much, or more, backcountry experience than today's backcountry specialists.

While specialisation appears intuitively useful for understanding some conflict situations, it is too narrow in its scope. Individuals come upon a range of constraints, as they move through the life course, which affect recreational participation. It appears that, rather than a one - way progression, specialisation may be more useful as a concept if it looks at recreation in the context of other aspects of life including family, work and age, all of which constrain individuals' participation in recreational activities. The suggested model (see Figure 3 in Chapter 2) might be useful if looking at recreationists of a similar age, however, as demonstrated, it fails in wider context. This deficiency is significant when looking at participation amongst older people, who have more time to develop their recreational activities as a central life interest, but who may also be more constrained by their physical fitness.

4.3.15 MOUNTAIN-BIKING AND PLACE IDENTITY

The description of running down-hill given earlier was similar to the way many bikers described mountain-biking. While younger trampers in the past may have had very different foci to their older counterparts, there was not the same propensity to perceive them as different. Without this perception of difference, there was little likelihood of conflict developing, in spite of the different values each group may have ascribed to the resource. The similarities between the way many trampers described their early tramping experiences and the way mountain-bikers describe their experiences, implies that the two populations may not be as different in outlook as they currently seem.

It is feasible to suggest that mountain-biking could provide a starting-off point for the development of the appreciation shown by the more specialised frontcountry users. However, it is difficult to say whether this appreciation will be reflected by future use of these places for *walking* rather than riding. Whatever eventuates will depend on how bikers are affected by the life cycle, their work patterns, and the opportunities available

for a range of different experiences. Providing for a wide variety of experiences, therefore, must remain a priority for recreation managers. Today's mountain-bikers could easily become tomorrow's walkers and then they might be glad of a few places free from bikes!

4.3.16 WALKERS' EXPERIENCES OF MEETING MOUNTAIN-BIKERS

Overall, walkers disliked meeting mountain-bikes on tramping tracks. Meetings are unpleasant for several reasons including personal safety (which was rated the second most common problem with mountain-biking after environmental damage; see Figure 18), and the intrusion of bikes into the feeling of freedom or wilderness that many get from walking through quiet areas.

I felt that somehow the sanctuary had been invaded, that here we were walking along, and more intrusive people came - people that needed to be accommodated.

Both bikers and runners require accommodating. Walkers feel they have to move out of the way for the faster moving users and the psychological costs of not doing so are usually too high to allow most walkers to hold their ground. Some others mentioned that the feeling of wilderness disappears when they come face to face with a bicycle which *should be on the road*. As one male tramper in his 40's commented in his questionnaire;

Mountain-biking problems: the intrusion of technology, i.e. meeting four wheel drives or mountain-bikes removes the wilderness feel of areas visited.

Many walkers I spoke to mentioned that they had been frightened or shocked by the sudden appearance of a mountain-bike coming round a blind corner. As one woman put it;

I was wandering along in my own little world and WHACK! along came a mountain-bike.

The obvious intrusion of the bike was well illustrated - her body language and intonation indicated the meeting had felt like a physical jolt. Although mountain-bikers may have had frights which detract from their enjoyment, no-one said they had experienced them, and few thought they would ruin the ride. This feeling that the meeting is more traumatic for the walker than the biker (on the whole) was confirmed in the following discussion between two recreationists who regularly participated in both walking and biking.

It would spoil my stroll if someone came hooning past on a mountain-bike a lot more than for the mountain-biker meeting a person on the track . . . in fact you don't walk to dodge the mountain-bikers.

No you don't, but you can go mountain-biking to dodge the people - in some respect they're another obstacle.

4.3.18 EXPERIENCE STYLES

Mountain-biking and tramping have very different experience styles. A respondent with a large repertoire of outdoor activities reflected on what the different activities felt like;

I do kayaking for a reactive sport - it's a reactive thing like rock climbing whereas tramping is much more of a slow, it's happening sort of thing . . . Mountain-biking is another reaction sport.

Mountain-biking requires that riders concentrate on what lies ahead so that they can react quickly to each obstacle and negotiate it safely. When seen in this light, a trumper or another biker may fit into the riding experience as another obstacle to react to. I am *not* saying that all bikers are using trampers as moving obstacles, but I am saying that sudden, unexpected meetings are more easily incorporated into the biking experience than into the walking experience. Walking is a low intensity experience where the enjoyment is in being able to relax and enjoy the scenery or even one's own day dreams without having to concentrate. As one young male put it;

. . . your brain when you're doing low intensity things like even cycling on the road, swimming, running and tramping . . . your brain can switch off and think about other things and somebody could be dreaming away quite happily thinking about whatever you're into thinking about and suddenly there's this mountain-biker coming down on you at 30 miles and hour "wham!" and that could annoy you a bit, I suppose.

To be forced to avoid a fast moving bike stops that feeling of relaxation. Another person compared this feeling to cycling on the road;

I'd say a mountain-biker coming towards you on a track is exactly the same as a truck going past you while you're on a bicycle on the road, in that you're not in control I guess - it's the truck driver that can hit or miss you - it's not you that's in control.

4.3.19 ROLE OF CONTROL

Perceived control is the common element in all these comments. Without it, people worry that something nasty could happen at any time. Thus, it is unnecessary for a walker to actually meet, or collide with, a fast moving mountain-bike for them to feel unsettled. All that is required is the threat of a collision which is beyond their control. Such a threat can prevent walkers from relaxing and being able to direct their attention towards more interesting things.

There are some ways to increase the control that people feel. A wide track with good visibility, for example, allows walkers to anticipate a meeting allowing the trumper some perceived control over the situation. Meetings on narrow tracks are thus the most unnerving for trampers because there is little warning of approaching bikers. In a sense, it is this very same lack of warning that many mountain-bike riders find attractive about narrow tracks. Because they cannot see too far ahead and must concentrate fully to react appropriately to upcoming obstacles, narrow tracks provide the most challenging riding.

Older trampers often have slower reaction times, less balance and less acute hearing. All these factors contribute to the lack of perceived control that they have when they meet bikes. The situation is more threatening to users that cannot move to areas that are less suitable for bikes. These are often the users who are most negatively affected by mountain-bikes. Well-graded tracks are limited in number, and these users do not like using the rougher tracks that are less popular with bikers. In trying to escape the danger and the lack of control that bikers feel on roads, bikers have made walkers feel similarly vulnerable on walking tracks.

These are things that many younger bikers could not understand or had not thought of. In some ways, trampers' preoccupations with track damage have focused the argument away from these issues. Many bikers think that if a track can withstand bike use, then it must be alright to ride on it. In reality, this is not the point at all. Older trampers may be less fit, less able to walk on rough tracks, or looking for tracks on which they can walk without having to concentrate on placing their feet carefully. They may want to focus on other aspects of the walk such as the scenery or their companions. These particular walkers will, therefore, favour smooth, well built, well graded tracks; the same tracks which bikers feel are alright to use because they will withstand the rigours of bike use. Not only are bikers more likely to use these well made tracks, but the walkers that favour the use of those tracks are the ones that are most affected by meeting bikes.

4.3.20 SECTION SUMMARY

The opinions of the individuals contacted during the course of this study confirm the existence of conflict between bikers and walkers. However, when compared with other recreational conflicts such as those between cross-country skiers and snowmobilers, it appears that there is generally more tolerance between trampers and bikers, perhaps because of the existence of a substantial group who participate in both activities.

There are distinct differences in the way trampers (as a whole) rank motivations for tramping compared with the way bikers rank motivations for biking. Physical exercise, for example, is more important for those who are mountain-biking, but this may also reflect mountain-biking's success as a substitute for activities such as tramping and kayaking. Overall, the mixture of motivations for tramping and biking are similar. The difference lies in the way these motivations are prioritised.

The two groups attribute different values to the outdoor resources that they share. This appears to come partly from differences in experience, or personal history in a particular place. Younger recreationists view a place in terms of utility, while those who have used the place for longer are more likely to be more personally attached to it. The different values may also spring, in part, from an individual's ability to compare that place with others that they use. Experienced backcountry trampers, for example, may view frontcountry areas as less pristine and wild than the backcountry areas in which they tramp. In comparison, frontcountry users may not have had the experience in backcountry areas to make this comparison, or they may no longer be able to use backcountry areas, so the comparison means little. Thus, specialised frontcountry users have very different attitudes towards environmental quality in the frontcountry than experienced backcountry users. Indications are that backcountry users can develop an appreciation of frontcountry areas as they become more constrained through changes in the life cycle, economic wellbeing or changes in work patterns, although this hypothesised progression really needs further research.

A further important element in the conflict is the way the experience of a particular activity can incorporate or accommodate meeting other, different users. In the case of mountain-bikers and trampers, this explains the asymmetrical nature of the conflict. For trampers, meeting a mountain-biker intrudes strongly into the recreational experience of

walking, while for bikers, meeting a trumper is easily incorporated into the experience of biking. In addition, once a trumper has been surprised by a biker, the expectation of meeting another can affect the whole outing. For older trampers, on narrow tracks, with blind corners, it can be unsettling to be worried about having to move quickly to avoid a fast moving bike. Therefore, the walking experience can be disrupted even when there is no meeting.

4.4 BEHAVIOUR

The third side of the Galtung triangle (1971, cited in Bercovitch, 1984) is behaviour. Behaviour both causes, and is caused by the development of attitudes and opinions as well as the overall situation. The encroachment of mountain-bikers onto walking tracks has threatened trampers' ability to *get away from it all*. While mountain-bikers appear to have the most control over the field situation, it appears that trampers as a group have the most control in the political arena. As the conflict has developed, trampers have moved to get bikers excluded from as many places as possible, thus threatening bikers' access to desired recreational experiences. It is this political behaviour that has evened up the conflict, so that now mountain-bikers can be found lobbying and developing negative attitudes towards trampers. These negative attitudes are evident in Figure 17 (presented in section 4.3.6) where the second most frequently suggested reason for the conflict was that trampers disliked mountain-bikers because they are arrogant, and so intolerant of other, different users.

4.4.1 POLITICAL ACTIVITY

The political activity surrounding mountain-biking, particularly in the Christchurch area, has made many mountain-bikers feel negatively about walkers. This observation is similar to the situation described by Jackson and Wong (1982), where the political actions of cross-country-skiers threatened politically inactive snowmobilers, who

originally felt no animosity towards them. Thus, the conflict between the two groups became symmetrical. The original asymmetrical nature of this conflict can also be explained by the idea of perceived control in the field that has helped understanding in the mountain-biker - tramper case. Perceived control of political outcomes is the underlying factor in the animosity that political activity fosters.

The increase in popularity that mountain-biking has had over recent years has left administering bodies trying to control the invasion. Unfortunately, many authorities have closed tracks off to bikes, as evidenced in many of the popular articles on mountain-biking. Baker (1990) mentions that mountain-bikers are a younger, more transient group of people who are not inclined to lobby in the same way as the trampers in the older age group. This lack of political will has been cited as a disadvantage in overseas situations and many areas in the States are now off-limits to bikers because of it.

This difference seems to exist in the Canterbury area, where a small group of bikers are up against large numbers of retired trampers, who have the time and inclination to lobby administering organisations. In comparison, mountain-bikers are younger and have little idea of how these things work. They show little inclination to write letters or make phone calls. It is the teenaged bikers that would be most disadvantaged by closing peri-urban tracks to bikers as they have little access to transport to other areas. As one teenage respondent said to me, *how could I take up kayaking when I have no car and no way of getting to [appropriate sites]?* Teenagers, however, are also the least inclined, or able, to take part in political arguments. They are also the most likely to ignore restrictions on the use of a track.

4.4.2 ORGANISATION

Bikers are also disadvantaged by their lack of organisation. Mountain-bike clubs have small memberships relative to the number of mountain-bike owners in New Zealand. The ones that I came in contact with during my research were not interested in politics. In comparison, tramping clubs are large and politically active, although much of the activity can be traced to a few highly active leaders who encourage participation from others in the club.

A recurring theme that came from walkers (all in the retired bracket) was that bikers are destroying the tracks that walkers have put in for walkers. Members of the Summit Road society put in many hours each week working on the tracks of the Port Hills, and they are understandably upset when they see their tracks deteriorating because of bicycle traffic. Often walkers suggested that bikers could redeem themselves by putting in some of their own time to help repair the damage they do. Many suggested that bikers should put in their own tracks. Many bikers that I spoke to indicated that they would be happy to go and help, but the group, as a whole, is in need of organisation. I suspect that this verbal support may not be reflected in high turnouts to track working parties for bikers. Overall, because bikers are a younger age group they may not have the time or inclination to go and work in this way. Much of the Summit Road Society's work is done during the week in working hours. This kind of timing would preclude many bikers from participating, as they are either in school or at work at these times.

4.4.3 COMPLIANCE

Banning bikes from tracks does little to solve the problem. Bikers feel that their sport is a valid activity and that if tracks are shut off, they will just have to ride on them illegally. One female biker in her 30s commented:

I'm aware that DoC's going to close up even more (tracks) and bikers won't be allowed onto them so I'm riding them while they're still there.

While this person implies that she will stop riding them when they are closed, many bikers express no such sentiments. Many, in fact, asked how bike bans could be enforced - a good question given the present system. Administering bodies need biker's voluntary compliance with restrictions that are put in place. While it is unlikely that *all* bikers will comply all the time, if bikers feel that they do have legal options within easy reach, they are more likely to respect any restrictions. Finding ways of getting the compliance of bikers is important if walkers' enjoyment is to be protected in more developed frontcountry areas. To a large extent, it appears that biker education may help to draw attention to factors such as why trampers dislike meetings.

It does appear, however, that some level of enforcement is necessary. Dustin and McAvoy (1984) argue that traffic lights work well because most people feel that they might get prosecuted for disobeying the rules. Similarly compliance on public roads requires the presence of enforcement agencies to work well. Although enforcement in recreation settings may be an anathema to many people, and seems to impinge on people's freedom in recreation, Dustin and McAvoy argue that it actually maintains freedom. Walkers who cannot find a track, where they can be sure they will not meet a mountain-bike, do not feel free.

4.4.4 ACCESS ISSUES

One Summit Road Society member expressed fear that much of the walking access that they had painstakingly negotiated with private landowners over many years, was threatened by the antics of some mountain-bikers. Landowners are annoyed by the presence of mountain-bikers on their land and this annoyance increases when bikers leave the track and disturb stock (*Banks Peninsula Times*, 10th March, 1994). Incidents like these threaten everybody's access to these areas and this fact worries walkers who have

put time into negotiating the access and who appreciate how easily it could be taken away.

The release of *Classic Mountain-bike Rides in New Zealand* has irritated Port Hills farmers. Unfortunately, the book was published a little too quickly and, in some cases, it has omitted to state that bikers should ask permission before using routes over private land. Politically astute bikers felt that these kinds of things presented problems for people who are working to get better access for bikers. In the absence of anything else, many bikers use the book to find new rides that they can try. Many are not aware of these problems and, even if signs are put up at the beginning of a track, that may not be enough to stop them using it. For anyone who has biked a long way to get to the end of a track, it is very hard to turn around and abort the trip. Walkers usually drive to the end of tracks and so find it relatively easy to move to another track, if that one is closed. However, if a track is closed to bikers, the effort and time required to ride to another track may be too much. If this is so, they will continue riding illegally as long as they can get away with it.

4.5 CHAPTER SUMMARY

Using the Galtung triangle as the basis for organising this chapter, I have documented the macrosociological or objective; the microsociological, or subjective; and the behavioural factors that have important roles in the development of conflict between mountain-bikers and trampers.

Mountain-bikers tend to be younger, male and more experienced in a wider range of activities than trampers. The age difference, in particular, makes interpretation of the differences between the two groups difficult, however, interview data have given clues to which differences might be explained by age.

Mountain-biking is both a product and a symptom of changing recreation patterns in the New Zealand setting. Some individuals have become specialised mountain-bikers, committing a large amount of time, money and effort to their participation. To other people mountain-biking complements their other outdoor activities, and is a substitute for those activities when they are constrained by factors such as weather, time or money. Mountain-biking thus fills a range of recreational *niches* which is reflected in its popularity.

At the subjective level, mountain-biking and tramping share a similar range of motivations, but people prioritise their motivations for mountain-biking differently to their motivations for tramping. Walkers have a setting focus in their interactions with the recreational resource, while bikers have an activity focus. This point is reflected in walkers' concerns that bikers do not seem to care about the natural environment. It also highlights the varying senses of place that mountain-bikers and trampers have about the resources that they share.

Trampers' lack of perceived control when they meet mountain-bikes detracts from their enjoyment of walking. If they feel they might meet bikes unexpectedly and suddenly, they are less able to relax and attend to their environment in the way they prefer. Bikers have more perceived control of meetings and so are not as upset by meeting trampers, as trampers are by meeting bikers. The asymmetry of the situation has been evened out by trampers' superior organisation and ability in the political arena.

Trampers are older, more organised into clubs, and more likely to know how to lobby the authorities, than bikers, which is proving useful in getting bikers excluded from many tracks. At the same time, administering bodies are largely unable to enforce many of the regulations that are put in place which means that the authorities need to work on gaining

the voluntary compliance of mountain-bikers which will require that bikers feel included in plans rather than excluded from them. In giving bikers access it is important to remember the different needs that they have compared with walkers. Where many walkers use a car to get to tracks, bikers usually ride to the beginning of a peri-urban track. Having to travel an extra 10 or 20 kilometres to use a track may be considered too difficult by many bikers - particularly the younger ones who appear to have the worst reputations at present.

Chapter 4

SUMMARY AND CONCLUSIONS

5.1 INTRODUCTION

This research has largely met the five objectives outlined in Chapter 1. My findings indicate that there is a well developed, conflict between walkers and mountain-bikers. Most trampers do not like meeting mountain-bikes on walking tracks and some feel strongly that biking is inappropriate on walking tracks. In addition, walkers are trying to get mountain-bikers excluded from many walking tracks through political activity. While there is a level of tolerance on both sides, there is considerable debate as to which areas are suitable for biking and which are not.

5.2 SUMMARY OF RESEARCH FINDINGS

5.2.1 THEORETICAL BASE

The Galtung Triangle has provided a useful framework for understanding the development of conflict between bikers and walkers and the role of *structure* and *agency* in that process. Of particular note, is its suitability for a *pragmatic* approach to research. The Galtung Triangle conceptualises conflict as a complex interplay of macrosociological (objective), microsociological (subjective) and behavioural factors. It provides a framework for testing different theories used in past research into recreational conflict, as well as ideas used in the broader study of social conflict.

Both Devall and Harry (1981), and Bury *et al.*(1983) suggested that objective approaches were most useful for understanding conflict, while Jacob and Schreyer (1980) have theorised that recreational conflict is goal interference and therefore essentially subjective in nature. Owens (1985) argues strongly that, without looking closely at the social psychological processes, research will never have a good understanding of conflict in recreational settings. My findings indicate that all of these as well as processes outside the recreation setting, have affected this conflict. All three areas have proved to be important in understanding conflict between mountain-bikers and walkers.

5.2.2 MACROSOCIOLOGICAL BASES OF CONFLICT

Mountain-bikers are predominantly male, under 30 years of age and very well educated. As a group they are physically fit and are interested in challenging themselves to increase their riding skills and fitness. However, this general description belies the range of individuals that mountain-bike. While teenagers make up a big group of participants, there were a few older, retired individuals who had taken up the activity. Similarly many women participate, although women are much better represented in walking or tramping. Increasing use of peri-urban areas, changing employment patterns, decreasing wages, the close proximity of the two types of users, and the impacts that mountain-bikes have on the environment, are macrosociological factors implicated in the conflict between bikers and walkers. In addition, the decline in club membership amongst the younger age groups, is seen as both an important indicator of structural changes in society, and as a factor in the development of conflict between mountain-bikers and trampers.

Mountain-biking provides a wide range of experiences from excitement, skill development and competition, through to gentle, non-competitive enjoyment of outdoor areas. For some people, it substitutes for activities such as tramping or climbing, when work or family commitments begin to influence their recreational choices. For younger people, it is relatively cheap to participate and biking makes the outdoors more accessible at a time when outdoor education is encouraging them to use the outdoors. Some bikers

use a bike to get to areas that are good for walking. Others have become specialist mountain-bikers who devote a large part of their time and money to the sport. Mountain-biking, thus, fills a range of recreational niches and can be adapted according to the needs and inclinations of the individual at any time throughout their life cycle.

At the same time, an increasing number of retired and semi-retired people are either maintaining, or developing, an interest in using the outdoors through walking. The aging population combined with the increased fitness and mobility of the older age groups indicate that this trend will continue. The increasing demand from both mountain-bikers and trampers for access to recreational resources, especially in peri-urban areas, is only likely to intensify the tension between the two groups.

As argued in the literature review, conflict results from change. Since 1984, there have been many changes in New Zealand society that have contributed to the conflict between mountain-bikers and walkers. New government policies included a shift toward a market economy, from an economy that had been controlled by the state. Additionally, spending in government departments dropped, so that previously subsidised services began to cost more, or were discontinued. Outdoor recreation has been affected by these moves as organisations such as the Department of Conservation and local councils (administrators of outdoor areas) move to recover their costs and to reduce spending. Once, trampers were able to catch a train from Christchurch to Arthur's Pass National Park, to go tramping for the weekend, but this is no longer possible. Teenagers are particularly constrained by a lack of money, and now find it much more difficult to gain access to backcountry areas.

Time is limited for other people whose work/ family commitments constrain their participation in outdoor activities. Work patterns have changed. Some people do not have the leisure time available for weekend trips, because they are working. With the

development of new recreational products, some outdoor recreationists now find their time constrained because they have many activities from which to choose. Mountain-biking is excellent for all the above mentioned situations. It provides a way to gain access to the outdoors for individuals who are short of money; it is a good activity to fit into short spaces of time between work and family commitments; and it is an ideal activity to mix with a range of other activities such as kayaking or windsurfing.

Mountain-biking is a physically and mentally intense form of activity that allows bikers more satisfaction when using "more boring" places. Quality of environment and the challenge of the wilderness experience have been replaced by an increased focus on physical fitness and technical challenge. This has been reflected in increased use of frontcountry areas and a drop in the use of backcountry areas, which now seem to be less accessible to the average New Zealander.

Rojek, 1985 argues that leisure has become more individuated - that is that people are more inclined to participate in activities that they can do alone. Mountain-biking in peri-urban areas allows exactly this. This individuation also appears to have increased in New Zealand since the beginning of restructuring in 1984, and is reflected in changing patterns of club membership. Although this is an area that needs more research, it appears that young people are less inclined to join outdoor recreation clubs than their counterparts in the 1970s. If this is so, clubs may eventually "die" as older members move on. Alternately clubs may need to adapt to the needs of younger members and the needs of a population who no longer can take weekends for granted.

5.2.3 MICROSOCIOLOGICAL (SUBJECTIVE) ASPECTS

Tramping differs from mountain-biking in the motivations and satisfactions that individuals gain from the activities. Mountain-biking tends to be more *activity focused* - where individuals gain most of their satisfaction from mastering new skills and increasing their physical fitness. In comparison, walkers are more *setting focused* and

thus more appreciative in their approach to the outdoors. It is no surprise, therefore, that walker-only respondents express concern about environmental damage, and often communicate a feeling that mountain-bikers have little respect for the environment or the places they use for biking. However, this distinction is not as clear as it may seem. The interview data indicate that the differences are linked to the way in which individuals value the resource and the way the process of valuation may change with age and experience.

Recreation resources are divided on the basis of environmental value. The value is affected by interaction with significant others, personal experience in the resource and, to a certain extent, a person's constraints. Teenaged bikers seldom have a *setting focus*, or identify personally with outdoor recreation settings, while older bikers appear to be *setting focused* in backcountry areas and *activity focused* in peri-urban areas. In comparison, walkers, who do not bike, are specialised frontcountry users and identify personally with frontcountry areas. To these people, frontcountry areas are of high value, and activities like mountain-biking and running, give the impression of ignoring that value. The value may also increase as individuals become more constrained, and hence more dependent on frontcountry areas.

The higher the values that individuals assign to a place, the less appropriate it becomes to mountain-bike there. It is this sense of appropriateness that shapes the way many walkers interpret signs of track damage. Often the imprint of tyres allows the damage to be identified as that done by mountain-bikes. Additionally, many walkers in places like the Port Hills have worked to build and maintain tracks in the area, and so signs of track damage annoy them more. In comparison, mountain-bikers, as a group, are seen to contribute little to track maintenance.

The focus of the debate surrounding mountain-biking has been on the environmental impacts of biking. This is understandable in today's world where everything has to be justified in a measurable way. Many questionnaire respondents felt that their subjective feelings and opinions were not as important as objective "facts" such as track damage and injury reports. While track damage, can and does, have an important influence on the feelings of walkers, it is unlikely that the conflict would disappear if resources suddenly became available for fixing damaged tracks.

The way in which meeting another user can be incorporated into the subjective, recreational experience, is one indicator that appears to be a factor in all recreational conflict situations. As bikers ride, they are constantly acting to avoid obstacles that loom up in front of them. To some extent, meeting a trumper or runner is similar to coming upon another obstacle which needs avoiding. The biker is readily able to assimilate the meeting into the experience of biking on rough ground. In comparison, walkers are usually out to relax, slow down and enjoy their surroundings. An important part of the experience is to be able to take time to move slowly and notice details such as the surrounding flora and fauna, or to lose oneself in thought. Meeting a mountain-biker unexpectedly is a major disruption to the desired experience. Walkers may also fear being injured by a bike. When they meet a biker, they feel as if they are neither able to control the danger in the situation nor are they able to maintain the experience of relaxation.

Trampers' experiences can be diminished by the mere threat of a sudden meeting. For older trampers, who may have slower reaction times, and be less able to hear a bike approaching, it can be difficult to relax, if they fear meeting a bike. For younger walkers, with good hearing and quick reactions, this may not be such an issue. People who are familiar with the braking systems on the bikes may find meeting bikes less threatening, although they still have less control over their experience. Additionally, for

walkers, having a fast moving bike race past, even on a wide track is similar to a biker being passed by a fast moving car on the road. There is a distinct feeling of insecurity.

The person who feels *least* in control of the situation is the one that will feel the *most threatened* by the presence of the other user. Canoeists, therefore, feel more threatened by motor-boaters, cross-country skiers feel more threatened by snowmobilers, and cyclists feel more threatened by motor vehicles than *vice versa*. In all these cases, the group that feels the least impact is the group whose activity can most easily incorporate the experience of meeting another.

Younger, fitter walkers are less likely to use tracks that mountain-bikers use. Older walkers, who often preferred to use hardened, smoother tracks, were those most strongly against mountain-biking on walking tracks. It is these very tracks that bikers consider alright to use because hardened tracks sustain less damage and most of the protests about biking are centred on the damage they do to tracks! This lack of awareness on both sides is aggravating the conflict.

5.2.3 BEHAVIOUR

The sense of threat that bikers give walkers in the recreation setting, is balanced, to some extent, by the sense of threat that walkers give bikers through their actions in the political arena. Walkers are older, often have more time available for political activity, and are better organised into clubs and associations, which allows them to be heard in political circles. However, mountain-bikers, who are not so organised, cannot go to a decision-maker with the concrete support that a club of 300 can offer. Bikers are being heard, largely through the efforts of an active few who have found ways to combat this lack of organisation.

It does seem, however, that in spite of the power differences in the political arena, there is little to stop bikers from riding inappropriately. It is very easy for individuals to

defect and ride illegally, especially as they meet increasing numbers of *no biking* signs. The bikers that seem to have the most impact on walkers (teenaged boys) are probably also the ones who are least inclined to bike long distances on a road to find a track that they can use legally. Thus, some kind of enforcement may be necessary.

The difficulty is that nearly all bikers report using tracks where they are officially not allowed. While they may not meet any walkers on the track, they do leave evidence of their presence through tyre imprints. These can be enough to detract from some walker's experiences, maybe because it intensifies their perceived lack of control, and, in some cases because it shows disregard for the efforts of those who have helped build the tracks.

Behaviour draws attention to the role of managers in managing the escalation of a conflict situation. Both groups in this conflict have the power to threaten the other. Initially, when the conflict was asymmetrical in nature, conflict was the direct result of bikers activities interfering with the goals of walkers, who felt that bikes were taking over all their favourite tracks. Without some form of management action it appears that the occasional renegade biker can still disrupt the experiences of many walkers.

5.3 IMPLICATIONS

Banning bikes from all non-roaded areas is as unworkable as allowing them a free run of all walking tracks. In spite of the conflict, most walkers feel that biking is a legitimate, healthy activity and, conversely, most of the bikers I spoke to felt that some restrictions on access are reasonable. Both groups, however, disagree on how many tracks, and which tracks, should be allocated for bike use.

Walkers often seemed to think that providing one or two tracks for bikers would be enough. The difficulty with this is that bikers, like walkers, have a wide range of tastes and preferences and, in general, they like variety. For example, many respondents felt

that four wheel drive tracks in open country are ideal for biking, while others expressed distaste at the thought of using such places. To them, bush, trees and intimate narrow tracks are an important part of the experience. Additionally, many younger bikers have little access to motorised transport and are not inclined to bike long distances on roads to reach a suitable off-road area. A biker with a walking track five kilometres away and a biking track 15 kilometres away, is obviously going to be tempted to use the former, regardless of its legality.

Education is viewed positively by both groups. Mountain-bikers consider it important that younger riders are educated to take more care, because they feel that it is younger riders who have caused mountain-biking's bad image. Trampers feel that bikers need more respect for other users, and that teaching them appropriate behaviour (and respect for the rules) would be a good thing. Mountain-bikers would also like to see some education directed at trampers who, they feel, are quick to judge mountain-biking as bad when they know very little about the activity. Education is also needed to increase the accuracy of trampers' expectations, that is which tracks may be used by bikes and which tracks may not. The same information is required by bikers. The small number of bikers belonging to clubs at present tends to rule clubs out as effective avenues for educating bikers, however, they may still be useful for informing trampers.

One way to educate bikers would be for managers to facilitate track maintenance (or possibly construction) by groups of mountain-bikers that are recruited from clubs or schools. The latter may be more successful if the idea is thought of primarily as a form of experiential education, where budding mountain-bikers can learn to appreciate the work that goes into tracks, the feelings of those people with whom they share the tracks when they are riding, and even techniques for minimum impact riding. Some bikers need to realise the amount of work that goes into track building and maintenance, and it

would be beneficial if walkers saw that bikers were helping to maintain the tracks that they use.

Tracks with good visibility and width offer more perceived control to walkers, so these are the best types of tracks for dual use. These should be clearly marked as dual use tracks so that walkers expect to meet bikers. At the same time many walkers would use a dual use track as a second choice. Walkers overwhelmingly prefer not to share tracks with bikers, so there should be restrictions on biker access to some tracks (especially high use, narrower tracks).

Many riders could be catered for in areas of exotic forest and open ground with the appropriate features of mud, potholes *etc.* Many respondents noted that they enjoy using the mountain-bike track at Bottle Lake in Christchurch, for example. There is also a small group of more specialised bikers who travel long distances to get to good biking areas. For these people, the surroundings are much more important and it is unrealistic to expect them to use only tracks that motor vehicles can travel on or which run through exotic forest areas. Narrower, bushed tracks provide a pleasant environment which challenges better riders. For many bikers, disused roads and old tram tracks on the West Coast of the South Island provide many interesting opportunities for exploration and challenge. The Recreation Opportunity Spectrum might be a useful framework for looking at allocation of tracks for mountain-biking and for communicating that information to bikers.

For many tracks, there are times of the day, week or year when they are seldom used by walkers, and bikers who know this, are upset that they are restricted from using them, regardless of when they are there. In reality, those that train in the early mornings often use tracks that are signposted as not for bikes. At that time of day, few are around to notice and many report never having met anyone on these tracks at these times.

Similarly, tracks such as the Heaphy might be suitable for use during the off-season so long as they are hardened enough to withstand bike use.

Whatever happens, it appears that the sooner action is taken and decisions are made in the political arena, the less likely conflict is to escalate further. Mountain-biking is seen as both legitimate, and environmentally friendly when it is confined to the appropriate places. The problem lies in defining what exactly is appropriate, and appropriateness is often defined through norms and tradition. Decisions must be seen to be fair so that there is an element of consensus and hence, a greater likelihood of voluntary compliance. At the same time, they need to be taken as quickly as possible so as to begin the process of adaptation to, and adoption of, new norms. As long as people feel that they have something to gain, lobbying will continue, meanwhile increasing the mutual feelings of dislike between the groups. Putting off a decision can therefore cause as many problems as making them too quickly.

Managers need to realise that many of the differences between the two groups may be due to differences in age, life cycle stage and fitness rather than being deep-seated and irreconcilable. Many trampers recalled their initial approach to tramping in the same sort of terms that bikers use when they speak of their preferences and motivations. It seems, therefore, that mountain-bikers are users that will, with experience, come to appreciate the details and scenery in the same way that trampers have done. Without access to those experiences, people may not develop the sense of place that fosters a conservation ethic.

In spite of the above discussion, which centres around gaining voluntary compliance, it appears that some enforcement may be necessary. There are a few riders that display disregard for other users and for management attempts to keep them off a track. It

seems likely that a small amount of well publicised enforcement may be all that is required to discourage most bikers from riding without considering their actions.

5.4 SIDE ISSUES

This study has raised questions in regard to Bryan's (1979) specialisation theory, and to the concept of substitution. Bryan suggests that specialisation is a useful framework for understanding conflict, however in the case of mountain-bikers and walkers it is of little use without some modifications to take account of specialisation in the older age groups. Intuitively, specialisation is a good model for individuals that have made recreational activities a central life interest. However, in the older age groups, less strenuous activities may be substituted for physically strenuous forms of activity. In some cases the individual may appear to revert to what Bryan considers a *less specialised* form. Specialisation theory therefore needs more consideration of patterns amongst older participants in physically strenuous activities.

I also suggest that substitution has been defined too narrowly in the past. The use of qualitative methods has revealed that, from the perspective of the individual, substitution is a prime means of adjusting to new constraints. Far from being a useful management tool, substitution is a normal and integral part of the lives of outdoor recreationists. The findings of the study also raise new research questions that stem from these ideas on substitution and specialisation.

I strongly recommend triangulation of methods as a way to gain a good understanding of the many different influences in social situations. Often during the analysis of my research data, the qualitative data proved invaluable in interpreting what the quantitative data actually meant. The ability to cross check meant that the big difference in the age structure of the two groups, for example, did not render the data useless. Instead, the differences in the two samples proved to be of particular interest, and could be interpreted as such from the remarks of the respondents themselves.

5.4 FURTHER RESEARCH OPPORTUNITIES

According to this research, mountain-bikers, as a group, are very young. Of particular interest is how the age structure of the group changes as mountain-biking becomes a more accepted form of activity. Additionally, because mountain-biking has been found to lend itself to substitution and specialisation, it may be interesting to track the attitudes and aspirations of mountain-bikers over time. Will teenaged bikers branch out into other activities and begin to use backcountry areas through these activities, or will the current popularity of the frontcountry increase as a result of changes in attitude towards work and leisure?

Substitution is far more than a management tool. This research indicates that it is integral to the life of all outdoor recreationists and is useful to adjust to life changes resulting from the family life cycle, changes in work patterns and changing physical abilities. Substitution is therefore an important part of understanding the effect of these changes on recreational participation and on understanding how demand for recreation resources might change with changing pressures on different age groups within society. Exploring substitution from this perspective may also help managers to understand how recreation patterns might change with an individual's circumstances.

It is interesting to wonder why clubs have dropped in popularity amongst the younger age groups. Understanding the reasons for this may be helpful in predicting future patterns of membership and also it may show what, if anything, has replaced or might replace the club as an institution. From the perspective of clubs it may be worth looking at how they might need to adapt in order to attract younger members, or at least how they might disseminate information to other, similar recreationists. As mountain-bikers have found, it is disadvantageous to have a few members of one's recreational group giving everyone a bad name.

All of these research opportunities are linked to major social changes. In particular, change in the workplace will affect recreational needs. Understanding how individuals have dealt with changes brought about by new legislation and economic policies, may offer some explanation of how demand for outdoor recreation changes.

In addition, people's relationships with places have explained much of the conflict between bikers and walkers. They also have implications for conservation and future conflicts that may occur as new technologies develop. It would be interesting to investigate the process of building a sense of place over time. How do education, experience and constraints affect people's feelings about place? What is the link between the development of place attachment and specialisation theory? Do people have to be *place dependent* before they can develop *place identity*? What are the implications of this process for management of natural or semi-natural areas?

5.5 FINAL WORD

Although conflict between bikers and walkers may be seen as a relatively small social phenomenon, it has proved to be a complex process affected by factors in the wider environment as well as by social psychological factors. Originally, it did not appear that these factors were going to be important. The broad framework of the Galtung Triangle and the use of a range of research methods have proved an excellent combination for investigating this situation, and understanding the intricacies of this, and some other conflict processes.

BIBLIOGRAPHY

- ABSHER, J.D. & LEE, R.G., 1981. Density as an Incomplete Cause of Crowding in Backcountry Settings. *Leisure Sciences* 4(3):231-247.
- ADELMAN, B.J., HEBERLEIN, T.A. & BONNICKSON, T.M., 1982. Social Psychological Explanations for the Persistence of a Conflict between Paddling Canoeists and Motorcraft Users in the Boundary Waters Canoe Area. *Leisure Sciences* 5(1):45-61.
- AJZEN, I., 1991. The Theory of Planned Behaviour. *Organisational Behaviour and Human Decision Processes* 50:179-211.
- AJZEN, I. & DRIVER, B.L., 1992. Application of the Theory of Planned Behaviour to Leisure Choice. *Journal of Leisure Research*, 24(3):207-224.
- ANDERSON, D. H. & P.J. BROWN. 1984. The Displacement Process in Recreation. *Journal of Leisure Research* 5(1):61-73.
- AXELROD, R., 1984. *The Evolution of Co-operation*. Penguin Books, London, U.K.
- BABBIE, E., 1989. *The Practice of Social Research*. Wadsworth Publishing Company, California, U.S.A., 5th Edition.
- BAKER, N., 1990. "Mountain Bike Management: a Tale of Three Cities." *Western Wildlands* Fall: 36-39.
- Banks Peninsula Times* 10th March, 1992. Errant Bikes Raise Ire of Landowners. P.4.
- BARKER, R.M., 1989. Tramping and Specialisation Theory. Trampers and guided walkers in the Greenstone Valley. Unpublished thesis submitted in partial fulfilment for the Degree of Masters of Applied Science, Lincoln University-College, Canterbury.
- BARNES, B., 1992. Status Groups and Collective Action. *Sociology* 26(2):259-270.
- BARNETT, S.C., 1991. *Castle Hill Rock Climbing: a Case Study of a Recreation versus Preservation Conflict*. Unpublished Dissertation presented in partial fulfilment of Post-Graduate Diploma in Parks, Recreation and Tourism, Lincoln University, Canterbury.
- BELENKY, M.F., CLINCHY, B.M., GOLDBERGER, N.R. & TARULE, J.M., 1986. *Women's Ways of Knowing: Development of Self, Voice and Mind*. Basic Books, U.S.A.
- BELL, K., 1991. Making Tracks: Gender Relations and Tramping Clubs. In *Proceedings of the New Zealand Sociology Conference*, December, 1990, Lincoln University, Canterbury.

- BELL, K., 1991. Hearing voices: a Feminist Approach. *New Zealand Journal of Geography* 92:4-5.
- BERCOVITCH, J., 1984. *Social Conflicts and Third Parties: Strategies of Conflict Resolution*, Westview Press, Colorado.
- BERNO, T., 1995. Cross-Cultural Research Methods: Content or Context? A Cook Islands Case Study. In R. Butler (ed.) *Tourism and Indigenous Peoples*, (In Press).
- BLUMENTHAL, T., 1990. S.O.S.: Save our Sport Through Activism and Education. *Bicycling* May:108-111.
- BRITTON, S., 1991. Tourism, Capital and Place: Towards a Critical Geography of Tourism. *Environment and Planning D: Society and Space* 9:451-478.
- BROMLEY, D.W., 1992. The Commons, Property, and Common Property Regimes. In Bromley, D.W. (ed.), *Making the Commons Work: Theory Practice and Policy*, ICS Press, San Francisco, p.3-15.
- BROWN, R., 1988. *Group Processes: Dynamics Within and Between Groups*. Basil Blackwell, Oxford, U.K.
- BRUNSON, M.W., & SHELBY, B., 1993. Recreation Substitutability: a Research Agenda. *Leisure Sciences* 15:67-74.
- BRYAN, H., 1977. Leisure Value Systems and Recreation Specialization: the Case of Trout Fishermen. *Journal of Leisure Research* 9:174-187.
- BRYAN, H., 1979. *Conflict in the Great Outdoors: Toward Understanding and Managing for Diverse Sportsman Preferences*. Birmingham, Alabama: Bureau of Public Administration, University of Alabama.
- BURCH, W.R. Jr., 1969. The Social Circles of Leisure: Competing Explanations. *Journal of Leisure Research* 1(2):125-145.
- BUTLER, R.W., 1982. The Development of Snowmobiles in Canada. In Wall, G. & Marsh, J.S.(eds.), *Recreational Land Use: Perspectives on its Evolution in Canada*. Carlton Library Series, Carlton University Press, Ottawa, Canada, pp365-390.
- BUTLER, R.W., 1974. How to Control 1,000,000 Snowmobiles? *Canadian Geographical Journal* 88:4-13.
- BURY, R.L., HOLLAND, S.M. & MCEWEN, D.N., 1983. Analysing Recreational Conflict. *Journal of Soil and Water Conservation* 38:401-403.
- CANTERBURY UNITED COUNCIL, 1986. *Port Hills Recreation Study*. Vol. 1: Summary and Conclusions, Report No. 378, September, 1986.

- CESSFORD, G.R. 1987, Recreation in the Greenstone and Caples Valleys: for whom and how? Unpublished thesis submitted in partial fulfilment of the Degree of Master of Applied Science, Lincoln College; University of Canterbury.
- CHAFETZ, J.S., 1988. *Feminist Sociology: an Overview of Contemporary Theories*. F.E. Peacock Publishers, Inc., Illinois.
- CHALMERS, S., 1989. *Mountain-Biking: an Examination of Present Issues, Responses to these Issues, and Potential for Future Use*. Dissertation completed in partial fulfilment of the Diploma in Parks and Recreation, Lincoln University, Canterbury.
- CHAVEZ, D.J., WINTER, P.L. & BAAS, J.M., 1993. Recreational Mountain-Biking: A Management Perspective. *Journal of Parks and Recreation Administration* 11(3):29-36.
- COELLO, D., 1989. Vicious Cycles? *Sierra*, May/ June:50-54.
- COLLINS, R., 1990. Conflict Theory and the Advance of Macro-Historical Sociology. In G. Ritzer (ed.), *Frontiers of Social Theory: the New Syntheses*, Columbia University Press, New York, U.S.A.
- COUGHLIN, D.P., 1994. *Recreation Resource Conflict, Utilisation and Allocation*. Unpublished Dissertation submitted in part fulfilment of Post-Graduate Diploma in Tourism, University of Otago, Dunedin, New Zealand.
- CRAIB, I., 1984. *Modern Social Theory: From Parsons to Habermas*. Harvester Press, Great Britain.
- CSIKSZENTMIHALYI, M., 1985. *Beyond Boredom and Anxiety*, Jossey-Bass, London, U.K.
- CSIKSZENTMIHALYI, M., 1988. The Flow Experience and its Significance for Human Psychology. In M. Csikszentmihalyi & I.S Csikszentmihalyi (eds.) *Optimal Experience: Psychological Studies of Flow in Consciousness*, Cambridge University Press, Cambridge, pp15-35.
- CUBIT, S., 1990. Horse Riding in National Parks: some Critical Issues. *Australian Parks and Recreation* 26(4):39-41.
- CUSHMAN, G.J., MOORE, K. & SIMMONS, D.G., 1995. Conceptualising Tourism and Leisure. *Annals of Tourism Research* 22(1) (forthcoming).
- DENZIN, N.K., 1989. *The Research Act: a Theoretical Introduction to Sociological Methods*. Prentice Hall, Englewood Cliffs, New Jersey, 3rd Edition.
- DEPT. OF STATISTICS, 1992. *1991 New Zealand Census of Population and Dwellings: National Summary*. New Zealand Department of Statistics, Wellington, New Zealand.

- DEVALL, B. & HARRY, J., 1981. Who Hates Whom in the Great Outdoors: the Impact of Recreational Specialisation and Technologies of Play. *Leisure Sciences* 4(4):399-418.
- DEVLIN, P.J., 1993. Outdoor Recreation and Environment: Towards an Understanding of the Use of the Outdoors in New Zealand. In H. Perkins and G. Cushman (eds.), *Leisure Recreation and Tourism*, Longman Paul, Auckland, New Zealand.
- DEVLIN, P.J. & O'CONNOR, K.F., 1988. Exploring Relationships of Recreation Users, Impacts and Management. In B. Craig (ed.) *Environmental Monitoring in New Zealand with emphasis on Protected Natural areas*. Proceedings of a Symposium, Dunedin, May 1988. Department of Conservation, Wellington, N.Z.
- DIETERICH, M.M., (Undated, c.1992). U.S.A.: "Have a Nice Day". The Ultimate Ride Guide Special Edition from the Publishers of *Mountain Biker*.
- DITTON, R.B., FEDLER, A.J. & GRAEFE, A.R., 1983. Factors Contributing to Perceptions of Recreational Crowding. *Leisure Sciences* 5(4):273-288.
- DRIVER, B.L. & BASSETT, J.R., 1975. Defining Conflicts Among River Users: a Case Study of Michigan's Au Sable River, *Naturalist* 26(1):19-23.
- DRIVER, B.L., BROWN, P.J., STANKEY, G.H. & GREGOIRE, T.G., 1987. The ROS Planning System: Evolution, Basic Concepts, and Research Needed. *Leisure Sciences*, 9:209-212.
- DRIVER, B.L. & TOCHER, R.C., 1970. Toward a Behavioural Interpretation of Recreational Engagements, with Implications for Planning. In B.L. Driver (ed.) *Elements of Outdoor Recreation Planning*, Ann Arbor, Michigan.
- Dunedin Star Midweek*, Wednesday 27th May, 1992. "Problems with Mountain Bikes".
- DUNN, D.R., 1970. Motorized Recreation Vehicles. *Parks and Recreation*, 5(7):10-14 & 46-52.
- DUNN, D.R., 1980. Future Leisure Resources. In T.L. Goodale & P.A. Witt (eds.) *Recreation and Leisure: Issues in an Era of Change*, Venture Publishing, State College, Pennsylvania, p.115-124.
- DUSTIN, D.L., & MCAVOY, L., 1984. The Limitation of the Traffic Light. *Journal of Parks and Recreation Administration* 2:28-32.
- ELLIS, G.D., & WITT, P.A., 1991. Conceptualization and Measurement of Leisure: Making the Abstract Concrete. In T.L. Goodale & P.A. Witt, *Recreation and Leisure: Issues in an Era of Change*, Venture Publishing Inc., State College, Pennsylvania, U.S.A., p.377-395.
- EYLES, J., 1985. *Sense of Place*. Silverbrook Press, Cheshire.
- FELDMAN, B., 1988. Hikers versus Bikers: the Sierra Club Revises its Mountain-Bike Policy. *Mountain Bike*, October: 25-28.

- FESTINGER, L., 1962. Cognitive Dissonance. In *Science, Conflict and Society: Readings from Scientific American*, (with introduction from Garrett Hardin). W.H. Freeman and Co., San Francisco, 1969.
- FINK, C.F., 1968. Some Conceptual Difficulties in the Theory of Social Conflict. *Journal of Conflict Resolution* 12:412-460.
- FYFFE, L., 1992. On the Ascent. *Sport and Leisure* 32:p.6,20-21.
- Getting Into Gear: Mountain Biking in Colorado*, 1990. Proceedings of a Statewide Symposium, Sept. 14th, 1990, Tamarran Resort, Durango, Colorado.
- GIDDENS, A., 1984. *The Constitution of Society*. Polity Press, Cambridge, U.K.
- GLASER, B.G. & STRAUSS, A.L., 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Weidenfeld & Nicolson, London.
- GLEICK, J., 1987. *Chaos: Making a New Science*. Viking, New York.
- GODBEY, G., 1985. *Leisure in Your Life: an Exploration*. Venture Publishing, Inc., State College, Pennsylvania, 2nd Edition.
- GOLDSTEIN, S.S., 1987. *Mountain Bikes and the Parks: Mitigation of Safety and User Conflict Problems*. Unpublished Dissertation submitted in partial fulfilment of the Degree of Bachelor of Arts in Environmental Studies, University of California, Santa Cruz, U.S.A.
- GOODALE, T & G. GODBEY, 1988. *The Evolution of Leisure: History and Philosophical Perspectives*. Venture Publishing Inc., State College, PA.
- GRAMANN, J.H. & BURDGE, R.J., 1981. The Effect of Recreation Goals on Conflict Perception: the Case of Water Skiers and Fishermen. *Journal of Leisure Research* 13(1):15-27.
- GRAY, A., 1981. Why Teenage Girls Abandon Physical Activity. In *Papers and Reports from the 1981 Conference on Women and Recreation 31/8 to 3/9, 1981*. New Zealand Council for Recreation and Sport, Wellington, New Zealand.
- HAGGARD, L.M. & WILLIAMS, D.R., 1991. Self Identity Benefits of Leisure Activities. In B.L.Driver, P.J. Brown & G.L. Peterson (eds), *Benefits of Leisure*, Venture Publishing Company, State College, Pennsylvania. pp.103-119.
- HAMMITT, W.E., 1988. The Spectrum of Conflict in Outdoor Recreation. In *Outdoor Recreation Benchmark*, Proceedings of a National Outdoor Recreation Forum, USDA Forest Service S.E. Forest Experiment Station, General Technical Report SE-52, Tampa, Florida.
- HARDIN, G. 1968. Tragedy of the Commons. *Science* 162:1243-1248.
- HENDERSON, K.A., 1990. Reality Comes Through a Prism: Method Choices in Leisure Research. *Society and Leisure* 13(1):169-188.

- HEYWOOD, J.L., 1993. "Game Theory: a Basis for Analysing Emerging Norms and Conventions in Outdoor Recreation." *Leisure Sciences* 15:37-48.
- HILLARY COMMISSION, 1992. Notes from the Mountain-Bike Workshop held at the Hillary Commission on Thursday 5th March, 1992, Wellington.
- HISLOP, B., 1989. Commercial Activity and Management of Prime Protected Natural Area. In D.A. Norton, *Management of New Zealand's Natural Estate*, Proceedings of a Symposium of the New Zealand Ecological Society held at the University of Otago, Dunedin 22-25th August, 1988, New Zealand Ecological Society Occasional Publication No. 1, 1989, p.54-55.
- ISO-AHOLA, S.E., 1986. A Theory of Substitutability of Leisure Behaviour. *Leisure Sciences* 8:367-389.
- ISO-AHOLA, S.E. & MANNELL, R.C., 1985. Social and Psychological Constraints on Leisure. In Wade, M.G. (Ed.), *Constraints on Leisure*. Charles C. Thomas, Springfield, Illinois.
- IVY, M.I., STEWART, W.P. & LUE, C., 1992. Exploring the Role of Tolerance in Recreational Conflict. *Journal of Leisure Research* 24(4):348-360.
- JACKSON, E.L., 1987. Outdoor Recreation Participation and Views on Resource Development and Preservation. *Leisure Sciences* 9(4):235-250.
- JACKSON, E. 1989. Perceptions and Decisions. In G. Wall (ed) *Outdoor Recreation in Canada*. John Wiley and Sons, Canada, p.75-132.
- JACKSON, E.L. & WONG, R.A.G., 1982. Perceived Conflict between Urban Cross-Country Skiers and Snowmobilers in Alberta. *Journal of Leisure Research*, 14(1):47-62.
- JACOB, G.R. & R. SCHREYER, 1980. Conflict in Outdoor Recreation: A Theoretical Perspective. *Journal of Leisure Research* 12:368-380.
- JACOBY, J., 1990. Mountain Bikes: a New Dilemma for Wildland Recreation Managers? *Western Wildlands* Spring: 25-28.
- JAMESON, F., 1984. Postmodernism, or the Cultural Logic of Capitalism. *New Left Review* 146:53-93.
- KELLER, K., 1990. *Mountain-Bikes on Public Lands: a Manager's Guide to the State of Practice*. Bicycle Federation of America, Washington DC.
- KELLY, J., 1990. *Leisure*. Prentice Hall, New Jersey, U.S.A., 2nd Edition.
- KELLY, J.R., 1991. Sources of Leisure Styles. In T.L. Goodale and P.A. Witt, *Recreation and Leisure: Issues in an Era of Change*, Venture Publishing Inc., State College, Pennsylvania, U.S.A., 3rd Edition, p.201-212.

- KENNETT, P., KENNETT, S., & KENNETT, J., 1993. *Classic Mountain-Bike Rides*. Kennett Brothers, Wellington, New Zealand.
- KITA, J., 1986. In the Outback. *Bicycling*, March, 1986:69-77.
- KNOPP, T.B. & TYGER, J.D., 1973. Study of Conflict in Recreational Land Use: Snowmobiling versus Skiing. *Journal of Leisure Research* 5(3):6-17.
- KREISBERG, L. 1973. *The Sociology of Social Conflicts*. Prentice- Hall, Englewood Cliffs.
- LANDIS, J.R., 1992. *Sociology: Concepts and Characteristics*, Wadsworth Publishing Company, Belmont, California, 8th edition.
- LANGER, E.J., 1991. *Mindfulness: Choice and Control in Everyday Life*. Collins-Harvill, London, U.K..
- LEE, R.G., 1972. The Social Definition of Outdoor Recreational Places. In W.R. Burch and N.H.Cheek & L. Taylor (eds.), *Social Behaviour, Natural Resources and the Environment*. Harper and Rowe, NY, 68-74.
- LILLI, W. & REHM, J., 1988. Judgemental Processes as Bases of Intergroup Conflict. In W. Stroebe, A. Kruglanski, D. Bartal and M Hewstone (eds.), *The Social Psychology of Intergroup Conflict: Theory, Research and Applications*. Springer-Verlag, Berlin, p29-45.
- LOFLAND, J. & LOFLAND, L.H., 1984. *Analyzing Social Settings: a Guide to Qualitative Observation and Analysis*. Wadsworth Publishing Co., Belmont, California, 2nd Edition.
- LYNCH, P., 1991. *Girls and Outdoor Education*. Unpublished thesis submitted in partial fulfilment of the Degree of Master of Education, University of Otago, Dunedin.
- MANNING, R.E. 1986. *Studies in Outdoor Recreation*. Oregon State University Press, Corvallis, Oregon.
- MCKERROW, B., 1989. Environmental Issues Mind Over Matter? *Adventure Supplement* July/August:9.
- MEYER, A., 1985. This Bike Can go Anywhere: That's What Worries Wilderness Lovers, *National Parks*, May/ June: 12-13.
- MITCHELL, G.D. (Ed.), 1968. *A Dictionary of Sociology*. Routledge and Kegan Paul, London.
- MOORE, R.L., & GRAEFE, A.R., 1994. Attachments to Recreation Settings: The Case of Rail-Trail Users. *Leisure Sciences* 16:17-31.
- MOORHEAD, & GRIFFIN 1989. *Organisational Behaviour*. Houghton Mifflin Publishing, Boston.

- MULGAN, R., 1994. *Politics in New Zealand*. Auckland University Press, Auckland, New Zealand.
- MULLEN, B., 1987. Introduction: the Study of Group Behaviour. In Mullen, B. & Goethals, G.R., *Theories of Group Behaviour*, Springer-Verlag, New York, p.1-20.
- NIELSEN, J.M., SHELBY, B. & HAAS, J.E., 1977. Sociological Carrying Capacity and the Last Settler Syndrome. *Pacific Sociological Review* 20(4):568-581.
- OSKAMP, S., 1977. *Attitudes and Opinions*. Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
- OWENS, P.L., 1985. Conflict as a Social Interaction Process in Environment and Behaviour Research: the Example of Leisure and Recreation Research. *Journal of Environmental Psychology* 5:243-259.
- PARKER, S.R., 1971. *The Future of Leisure and Work*. MacGibbon and Kee, London, U.K.
- PERKINS, H.C., 1988. The Country and the Town: the Role of Real Estate Developers in the Construction of the Meaning of Place. *Journal of Rural Studies* 5(1):61-74.
- PERSIG, R., 1974. *Zen and the Art of Motorcycle Maintenance*. Corgi Books, London, U.K.
- PRIESMEYER, H.R., 1992. *Organisations and Chaos: Defining the Methods of Non-Linear Management*. Quorum Books, Westport, Connecticut.
- PRYOR, J.B. & OSTROM, T.M., 1987. Social Cognition Theory of Group Processes. In Mullen, B. & Goethals, G.R., *Theories of Group Behaviour*, Springer-Verlag, New York, p.147-184.
- ROJEK, C., 1985. *Capitalism and Leisure Theory*. Tavistock Publications, London, U.K.
- ROJEK, C., 1993. Leisure and De-differentiation. *Society and Leisure*, 16(1):15-29.
- ROSENBERG, A., 1988. *Philosophy of Social Science*, Dimensions of Philosophy Series, Westview Press, Boulder, Colorado.
- ROSS, L.; NISBETT, R.E., 1991. *The Person and the Situation: Perspectives of Social Psychology*. Temple University Press, Philadelphia.
- RUDELL, E.J. & GRAMANN, J.H., 1994. Goal Orientation, Norms and Noise Induced Conflict among Recreational Area Users. *Leisure Sciences* 16:93-104.
- RUNGE, C.F., 1992. Common Property and Collective Action in Economic Development. In Bromley, D.W. (ed.), *Making the Commons Work: Theory Practice and Policy*, ICS Press, San Francisco, p.17-39.
- SARAH GERARD & ASSOCIATES, 1992. *Mountain Biking on the Port Hills and Christchurch Urban Area*. A Draft Discussion and Proposals Document, May 1992, Christchurch City Council and Selwyn District Council.

- SCHERL, L.M., 1989. Self in Wilderness: Understanding the Psychological Benefits of Individual-Wilderness Interaction through Self-Control. *Leisure Sciences* 11:123-135.
- SCHREYER, R., 1990. Conflict in Outdoor Recreation. In: *Social Science and Natural Resource Management*. J.Vining (ed.). Westview Press Boulder, Colorado.
- SCHREYER, R., LIME, D.W. & WILLIAMS, D.R., 1984. Characterising the Influence of Past Experience on Recreation Behaviour. *Journal of Leisure Research* 16(1):34-50.
- SCHREYER, R. & ROGGENBUCK, J.W., 1978. The Influence of Experience Expectation on Crowding Perceptions and Social-Psychological Carrying Capacities. *Leisure Sciences* 1(4):373-394.
- SCHWEIZER TOURISMUS-VERBAND, 1991. Mountain Bicycling: Signalling Radical Change. *STV Bulletin*, 1:13-14, in CAB Abstracts, 1990-91.
- SCOTT, D. & GODBEY, G.C., 1990. Reorienting Leisure Research - the Case for Qualitative Methods. *Society and Leisure* 13(1):189-205.
- SEWELL, W.R.D., & COPPOCK, J.T., 1977. *Public Participation in Planning*. Wiley, London, U.K.
- SHELBY, B., 1980. Contrasting Recreational Experiences: Motors and Oars in the Grand Canyon. *Journal of Soil and Water Conservation*, May June, 129-131.
- SHELBY, B., HEBERLEIN, T.A., VASKE, J.J. & ALFANO, G., 1983. Expectations, Preferences and Feeling Crowded in Recreational Activities. *Leisure Sciences* 6(1):1-13.
- SHELBY, B. & VASKE, J.J., 1991. Resource and Activity Substitutes for Recreational Salmon Fishing in New Zealand. *Leisure Sciences* 13:21-32.
- SIDAWAY, R. & THOMPSON, D., 1991. Upland Recreation: the Limits of Acceptable Change. *Ecos*, 12(1):31-39.
- SIMMONS, D. 1985. Integrating Formal and Informal Research Methods. *Les Cahiers du Tourism*. 44:20-23. Centre des Haute Etudes Touristique. Provence, France.
- SIMMONS, D.G. AND DEVLIN, P.J., 1982. The Recreational Hunter: Lake Sumner Forest Park. *Department of Horticulture, Landscape and Parks Bulletin* 33 Lincoln College.
- SMITH, S.J., 1984. Practising Humanistic Geography. *Annals of the Association of American Geographers*, 74(3):353-374.
- SPRUNG, G., 1990. Kokopelli's Trail: It's What Volunteers with a Vision can Accomplish. *Bicycling* February:19-20.

- STANKEY, G.H. & WOOD, J., 1982. The Recreation Opportunity Spectrum: an Introduction. *Australian Parks and Recreation*, February, p.5-13.
- STOKOWSKI, P.A., 1994. *Leisure in Society: a Network Structural Perspective*. Tourism, Leisure and Recreation Series, Mansell Publishing Ltd., London, U.K.
- STOKOWSKI, P.A. & LEE, R.G., 1991. The Influence of Social Network Ties on Recreation and Leisure: An Exploratory Study. *Journal of Leisure Research* 23(2):95-113.
- SUTTON, S., 1992. *Kapiti Island: a Case Study in Social Impact Assessment (Setting the Limits)*. Unpublished thesis submitted in partial fulfilment of the Degree of Master of Applied Science, Lincoln University, New Zealand.
- The Christchurch Press, Monday 20th July, 1992. "Mountain Bike Report Upsets", p.2.
- TILLET, G., 1991. *Resolving Conflict: a Practical Approach*. Sydney University Press, Australia.
- VIRDEN, R.J. & SCHREYER R., 1988. Recreation Specialisation as an Indicator of Environmental Preference. *Environment and Behaviour* 20(6):721-739.
- VOLLBON, T., 1990. Horse Riding in National Parks: a Management View. *Australian Parks and Recreation* 26(4):45-47.
- WALDROP, M.M., 1992. *Complexity: the Emerging Science at the Edge of Order and Chaos*. Penguin Books, London, United Kingdom.
- WATSON, A.E., D.R. WILLIAMS, J.J. DAIGLE. 1991. Sources of Conflict Between Hikers and Mountain Bike Riders in the Rattlesnake NRA. *Journal of Parks and Recreation Administration* 9(3):59-71.
- WEARING, B. & WEARING, S., 1992. Identity and the Commodification of Leisure. *Leisure Studies* 11:3-18.
- WILLIAMS, D.R., PATTERSON, M.E., ROGGENBUCK, J.W. & WATSON, A.E., 1992. Beyond the Commodity Metaphor: Examining the Emotional and Symbolic Attachment to Place. *Leisure Sciences* 14:29-46.
- WORCHEL, S., COOPER, J. & GOETHALS, G., 1991. *Understanding Social Psychology*. Brooks/ Cole Publishing Company, Pacific Grove, California.

PERSONAL COMMUNICATIONS

DEVLIN, P. 1994. A Christchurch City Council Ranger based at Victoria Park on the Port Hills.

ESPINER, S. 1994. Post-Graduate Student in the Department of Parks, Recreation and Tourism, Lincoln University, studying visitation in Arthur's Pass National Park.

LYNCH, P., 1994. Lecturer in Outdoor and Environmental Education, Department of Parks, Recreation and Tourism, Lincoln University.

TURNER, A. 1992. A Conservation Officer in the Christchurch Field Station.

SIGGLECOW, J. 1992. A Christchurch City Council Ranger based at the Sign of the Kiwi.

SIMPSON, P., 1992. Arthur's Pass Field Centre Manager for the Department of Conservation.

INTERVIEW CONTACTS

The following describe the people that I interviewed. In order to maintain confidentiality, their real names do not appear here and the information given is limited so that they are not identifiable.

- Karen:** A very experienced trumper who also regularly mountain-bikes recreationally.
- Bert:** A trumper who does not mountain-bike but who seldom uses frontcountry areas and is not worried by bikers.
- Rodney:** A very keen, competitive mountain biker who also works in a bike shop.
- Paul:** An all-round outdoor recreationist who participates in windsurfing, skiing, kayaking, tramping and alpine climbing as well as in mountain-biking.
- James:** A fifteen year old mountain-biker who is just starting out in mountain-biking and is keen to get into racing. He definitely prefers to ride downhill as much as possible! He has been out tramping with scouts, but has not had very much other experience in the outdoors yet.
- Jo:** A nineteen year old female who is a very competitive mountain-biker, but who has had very little other outdoor experience.
- Mary:** A self-confessed ex-couch-potato who found that she could enjoy physical activity when her friend introduced her to mountain-biking. She also has had very little other outdoor experience.
- Phillipa:** An experienced trumper, who has also tried a few other outdoor activities - kayaking, running *etc.* She is now a keen mountain-biker and rides both competitively and recreationally as well.
- Anne:** A teacher who does a lot of mountain-biking, tramping, skiing and kayaking.
- Maria:** Works in the outdoors where possible and has done a lot tramping, alpine climbing, skiing, windsurfing and also mountain-bikes regularly.
- Bob:** This man has spent a lot of time in the outdoors climbing, cycle-touring and tramping and is now a keen, recreational mountain-biker.
- Tracey:** A slightly older mountain-biker who has done a lot of competitive running in the past and is also a trumper.
- Brian:** A specialised mountain-biker who seems to spend every waking moment thinking about or participating in the sport. In the past he did a lot of caving and (motor) trailbike riding.

- Maryanne:** Brian's wife who also is a keen mountain-biker but also likes to get into the hills on foot. The bike has proved useful for getting to good hunting and tramping areas.
- Tony:** When I interviewed this man, he was adamantly against mountain-biking however shortly afterwards he was introduced to it and now enjoys mountain-biking along with his other activities of road biking, jogging and walking.
- Jane:** Tony's wife who occasionally joined in the discussion and gave her point of view as a walker-only.
- Tom:** In his thirties, Tom is an experienced backcountry tramper who has also found the Port Hills a good place for walking during his student years in Christchurch. He has done a little bit of mountain-biking on a borrowed bike. He feels strongly that mountain-biking is appropriate only in a few places, where they will not meet too many walkers and where walkers can see them coming from a reasonable distance.
- Henrietta:** An older female who has recently joined a walking group that spends time in frontcountry areas. She feels that mountain-bikers must be aggressive in nature to get to the places they do on their bikes. Her son is a mountain-biker, and she feels that this is a healthy sport but that it is not appropriate on many Port Hills tracks.
- Grace:** An older woman who enjoys walking. Originally expressed the opinion that mountain-bikers were different sort of people to walkers. She felt that mountain-bikers did need some places that they could ride in legally, but she also said that she preferred not to meet them.
- Mike:** An experienced tramper who had done a wee bit of mountain-biking.
- Gillian:** Mike's partner who was interviewed at the same time. Also a very experienced tramper who had done some mountain-biking, but who felt that mountain-biking was not appropriate on narrow steep tracks.
- George:** A keen climber and tramper and now a very keen mountain-biker who could not see why there is so much fuss about mountain-biking.
- Cath:** George's partner who does not mountain-bike, but who is quite happy to walk in the same places that George bikes, and who does not generally mind meeting bikers. She is also a keen rock climber.
- Charles:** An older male who has spent much time walking on the Port Hills. He grew up in Lyttelton and remembers how it was when the Summit Road was just a walking track. Charles and his wife regularly go out walking round the Port Hills and Foothills of Canterbury.
- Chris:** This man was strongly against mountain-biking. He is actively campaigning to get them excluded from many areas. He walks regularly, and has been an active backcountry user in the past.

David: A landowner on the Port Hills who has a walking/ biking track running over his land.

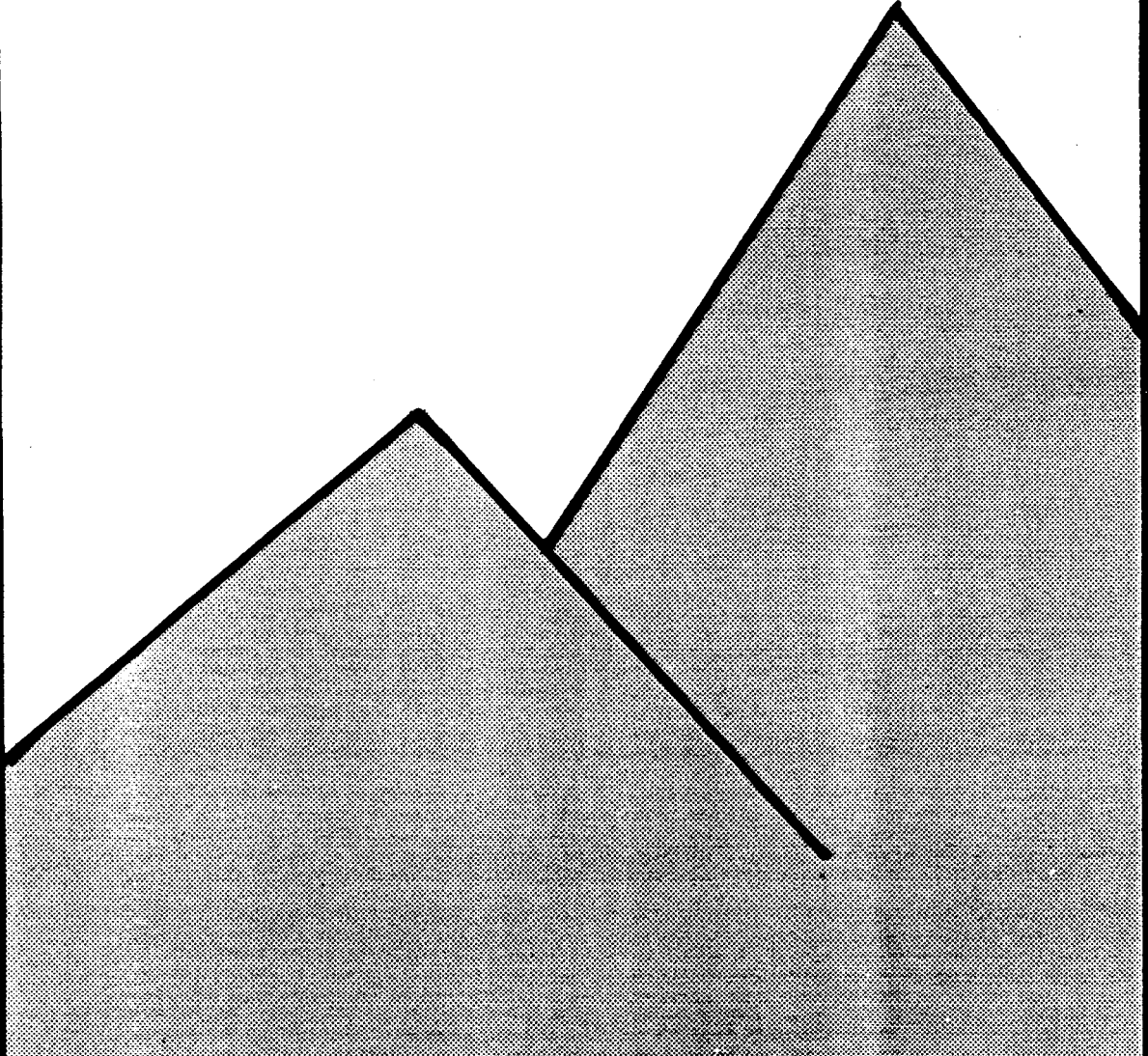
Duncan: A male of around 40 who is a keen mountain-biker over the summer months. He has little other outdoor experience.

Luke: An active member of the Summit Road Society, who does a lot of work for conservation and recreation in the area.

Leanne: An older woman who has done a lot of running in the past and has been involved in local body politics. She feels that mountain-bikers do need some provision, however, there should be some limits on them.

A group of students from Canterbury University: A focus group session was held with seven people all of whom had a wide range of outdoor interests including kayaking, alpine climbing, skiing, orienteering, rock climbing, tramping and, of course, mountain-biking.

Mountain Bike Survey

A stylized graphic of two mountain peaks. The peaks are filled with a grey stippled pattern and outlined in black. The larger peak is on the right, and the smaller one is on the left.

TRAMPER
QUESTIONNAIRE



Department of
Parks, Recreation &
Tourism
Lincoln University

Canterbury Mountain Bike Survey.

Tramper Questionnaire.

Dear tramper,

My name is Chrys Horn. I'm completing a thesis at Lincoln University, and writing a report for the Department of Conservation on mountain biking around Canterbury. To help me gather the views of those recreationists who may be in contact with this new activity, I would very much appreciate it if you would fill out one of these questionnaires.

YOUR VIEWS ARE IMPORTANT. THE INFORMATION YOU GIVE WILL HELP ME FIND OUT ABOUT THE ISSUES ASSOCIATED WITH MOUNTAIN BIKING AND WHAT IS REQUIRED FOR RECREATION IN THE FUTURE.

All information given on this questionnaire will be treated as confidential.

The questionnaire should take 10 to 15 minutes to complete. It should be returned in the stamped, addressed envelope provided.

This questionnaire should be answered only ONCE and only by people aged 12 years or more. If you have already filled in one of these, please tick the box and return the questionnaire unanswered in the self addressed envelope provided.

[]

Many thanks for your assistance and time.

Section 1: What are your recreational interests?

1. What outdoor activities have you been involved with, now or in the past?
- day walking []₁
 - tramping (overnight) []₂
 - climbing []₃
 - kayaking or canoeing []₄
 - running or triathlons/ multisport events []₅
 - windsurfing []₆
 - motor cross or trail biking []₇
 - down hill or cross country skiing []₈
 - road cycle racing []₉
 - cycle touring []₁₀
 - mountain biking []₁₁
 - other (please specify) []₁₂
- _____
- _____

2. Which 3 outdoor activities are most important to you at present? (1=most)

1. _____
2. _____
3. _____

3. Overall which activity do you enjoy the most? _____

4. Do you belong to any of the following organisations? (✓)

- ₁[] Greenpeace
 - ₂[] Forest and Bird
 - ₃[] Maruia Society
 - ₄[] Summit Rd. Society
 - Tramping/ climbing club(s) []₅
 - Mountain Bike club(s) []₆
 - Canoe club(s) []₇
 - Deerstalker's Association []₈
 - Other outdoor or conservation type organisations (please specify) []₉
- _____

Section 2: Your preferences in tramping

5. Please circle the number you think applies to your ideal tramping trip:

Presence of tracks and Huts	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
	no	few	half	mostly	All
	tracks	tracks	tracks	tracks	tracks
	no	few	some	and	and
	huts	huts	huts	huts	huts

How long would it be?

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
< 1	2-3	4-5	6-7	>7	
day	days	days	days	days	

Can you give an example of a favourite trip? _____

6. Why do you go tramping? (please number only 3 in order of importance - 1 = most important).

to enjoy beautiful scenery	[] ₁
to get back to basics	[] ₂
getting away from the hassles of everyday life	[] ₃
it's a challenge	[] ₄
physical exercise	[] ₅
it's a good test of skill	[] ₆
I like to test myself against others	[] ₇
I enjoy the social side of it	[] ₈
to explore new areas	[] ₉
other (please specify)	[] ₁₀

7. How do you feel about meeting others on tramping tracks? (Please circle the number that applies to you).

Walkers/trampers

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly like	like	neither like nor dislike	dislike	strongly dislike

Runners

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly like	like	neither like nor dislike	dislike	strongly dislike

Mountain bikers

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly like	like	neither like nor dislike	dislike	strongly dislike

Do you have any comments you would like to add here?

Section 3: A look at Mountain Bikers.

8. Which **TWO**, in order of importance (1= most important) do you feel are a problem when mountain bikers use walking tracks.

- no problems []₀
- you feel as if your peace and quiet is interrupted by bikes []₁
- all mountain bikers are "hoons" []₂
- personal safety []₃
- track damage []₄
- other (please specify) []₅

9. What sort of places do you feel are appropriate for mountain biking?

10. What characteristics do you think a track used for mountain biking should have?

11. Are there any places that you feel are **NOT** appropriate for mountain biking (if yes, please describe and give examples)?

12. Have you personally met bikers on walking tracks? No [] If yes:

Where?

How often?

And finally some brief questions about yourself:-

13. Do you have a mountain bike? (✓)

yes []₁ Go to Q 14.

no []₂ Go to Q 16.

14. How long have you had it? _____

15. Have you ridden it off-road? If yes, where?

16. Please indicate your age category at last birthday (✓)

12-14 []₁

15-19 []₂

20-24 []₃

25-29 []₄

30-39 []₅

40-49 []₆

50-59 []₇

60+ []₈

17. What is your highest educational qualification? (✓)

some secondary schooling []₁

school certificate or similar []₂

sixth form certificate/ university entrance []₃

higher school certificate []₄

vocational or trade qualification []₅

university degree / diploma []₆

other (please specify) []₇

18. What is your occupation? (please be specific)

19. Are you []₁ male or []₂ female? (✓)

If you have any further comments on mountain biking please add them here.

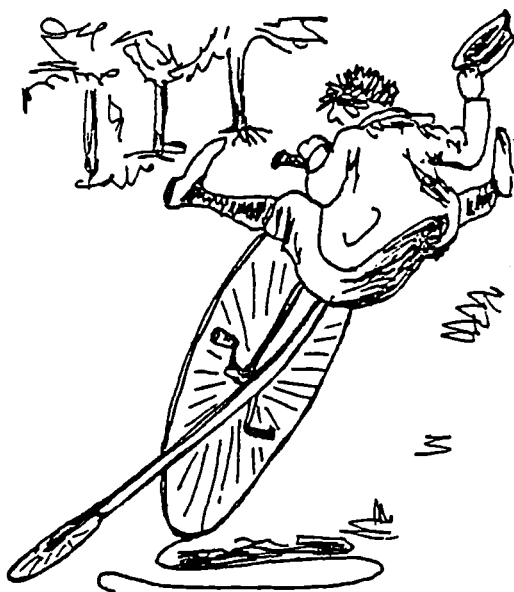
I am keen to follow up this questionnaire with face to face interviews. If you are willing to take part in a follow up study, please supply your name and phone number (or postal address below).

Phone: _____

Thank you for taking the time to complete the questionnaire.

Chrys Horn,
Department of Parks, Recreation and Tourism,
Lincoln University.
August/September 1992.

MOUNTAIN BIKE USER SURVEY



1992



Department of
Parks, Recreation &
Tourism
Lincoln University

Mountain Bike Users

Canterbury Survey

Dear mountain biker,

My name is Chrys Horn. I'm completing a thesis at Lincoln University, and writing a report for the Department of Conservation on mountain biking around Canterbury. To help me gather the views of mountain bikers, I would very much appreciate it if you would fill in one of these questionnaires.

YOUR VIEWS ARE IMPORTANT. THE INFORMATION YOU GIVE WILL HELP ME FIND OUT ABOUT MOUNTAIN BIKERS AND THEIR SPORT, AND WHAT SORTS OF AREAS THEY NEED FOR THEIR RECREATION IN THE FUTURE.

All information on this questionnaire will be treated as confidential.

The questionnaire should take approximately 10 minutes to complete.

Please return the completed forms in the stamped addressed envelopes provided as soon as possible.

This questionnaire should be answered only ONCE, and only by people aged 12 years or more.

If you have already filled one in then please ✓ here and return the unanswered questionnaire in the envelope supplied. []

Many thanks for your assistance and time.

Section 1: What are your recreational interests?

1. What other outdoor activities have you done in the past? (✓)

- | | | |
|--|-----|----|
| day walking | [] | 1 |
| tramping (overnight) | [] | 2 |
| climbing | [] | 3 |
| kayaking or canoeing | [] | 4 |
| running or triathlons/ multisport events | [] | 5 |
| windsurfing | [] | 6 |
| motor cross or trail biking | [] | 7 |
| downhill or cross country skiing | [] | 8 |
| road cycle racing | [] | 9 |
| cycle touring | [] | 10 |
| other (please specify) | [] | 11 |
-

2. Which 3 outdoor activities do you do the most at present? (1 = most)

1. _____

2. _____

3. _____

3. Overall which activity do you enjoy the most?

4. Do you belong to any of the following organisations? (✓)

- | | | | |
|---|----------------------------|-----|---|
| ₁ [] Greenpeace | Tramping/ climbing club(s) | [] | 5 |
| ₂ [] Forest and Bird | Mountain Bike club(s) | [] | 6 |
| ₃ [] Maruia Society | Canoe club(s) | [] | 7 |
| ₄ [] Summit Rd. Society | Deerstalker's Association | [] | 8 |
| Other outdoor or conservation type organisations (please specify) | | [] | 9 |
-
-

Section 2: Mountain Biking and Outdoor Recreation

5. Approximately, how long have you had a mountain bike? _____

6. Why do you go mountain biking? (please rank only 3 in order of importance: 1=most important)

- to enjoy beautiful scenery []₁
 - to get back to basics []₂
 - getting away from the hassles of everyday life []₃
 - it's a challenge []₄
 - for physical exercise/ fitness []₅
 - it's a good test of skill []₆
 - to test myself against others []₇
 - I enjoy the social side of it []₈
 - to explore new areas []₉
 - to test my skills in the backcountry []₁₀
 - other (please specify) []₁₁
-
-

7. Which of the following (it may be more than one) have you used your mountain bike for in the last year? (✓)

- cycle touring (day trips or overnight trips on the road) []₁
 - commuting to and from work or around town []₂
 - day trips off road []₃
 - overnight trips off road []₄
 - racing/competition/training []₅
 - other (please specify) []₆
-
-

8. Which of these (it may be more than one) do you expect to use your mountain bike for in the next year? (✓)

- cycle touring (day trips or overnight trips on the road) []₁
 - commuting to and from work or around town []₂
 - day trips off road []₃
 - overnight trips off road []₄
 - racing/competition/training []₅
 - other (please specify) []₆
-
-

9. If you go off road, what areas or tracks do you currently use your mountain bike on? (1 = places most frequently used)

1. _____
2. _____
3. _____

10 About how many days in the last year would you have gone off road? (✓)

- less than 6 []₁
- 7-12 []₂
- 13-24 []₃
- 25-50 []₄
- 50-100 []₅
- 100+ (more than twice a week) []₆

Section 3: Design of Tracks

11. Please circle the number you think applies to your ideal mountain bike track:

Width.

- | | | | | |
|----------------------|----------|----------|----------|-----------------------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| less than
1 metre | 1m | 1.5m | 2m | more than
2 metres |

Surroundings.

- | | | | | |
|----------|------------------|-----------------|----------------|----------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| forest | mostly
forest | half
'n half | mostly
open | open |

surface

- | | | | | |
|--------------------|--------------------|----------|------------------|----------------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| rough
steps etc | many
roots etc. | mixed | mostly
smooth | smooth
easy |

12. If you have any further comments to add on tracks then add them here.

13. How do you feel about meeting the following users on these tracks?

Mountain Bikers

- | | | | | |
|------------------|----------|-----------------------------|----------|---------------------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| Strongly
like | like | neither like
nor dislike | dislike | strongly
dislike |

Walkers/trampers

- | | | | | |
|------------------|----------|-----------------------------|----------|---------------------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| Strongly
like | like | neither like
nor dislike | dislike | strongly
dislike |

Runners

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly		like	neither like	dislike	strongly
like			nor dislike		dislike

4WD/trailbikes

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Strongly		like	neither like	dislike	strongly
like			nor dislike		dislike

14. Do you have any further comments about meeting other users?

Section 4: Other users on tracks

15. Have you ever had any negative encounters with other users? If yes what happened?

16. For those walkers that express dislike, which TWO of the following do you think they are most worried about?

- they feel as if their peace and quiet is interrupted by bikes []₁
- they think all mountain bikers are "hoons" []₂
- personal safety []₃
- track damage []₄
- other (please specify) []₅

17. What do you think the problem is?

18. Do you have any ideas about how some of these problems might be solved?

Section 5. ..And finally, some brief questions about yourself:-

19. Are you male or female? (✓)

20. Please indicate your age group at last birthday (✓)

- 12-14 1
- 15-19 2
- 20-24 3
- 25-29 4
- 30-39 5
- 40-49 6
- 50-59 7
- 60+ 8

21. What is your highest educational qualification? (✓)

- some secondary schooling 1
 - school certificate or similar 2
 - sixth form certificate/ university entrance 3
 - higher school certificate 4
 - vocational or trade qualification 5
 - university degree / diploma 6
 - other (please specify) 7
-

22. What is your occupation? (Please be specific eg unemployed, child care worker, mother, secondary school student)

If you have any further comments to add on the subject of mountain biking, please add them here.

I am keen to follow up this questionnaire with face to face interviews. If you are willing to take part in a follow up study, please supply your name and phone number.

Phone: _____

Thank you for taking the time to complete the questionnaire,

Chrys Horn,
Department of Parks, Recreation and Tourism,
Lincoln University.