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The Foxton Loop Conflict: An Investigation of Nature

A thesis presented in partial fulfilment of the requirements
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Abstract

This thesis examines the social construction of nature. The focus of this thesis is on how conflict can arise from different social constructions of the same 'natural' phenomenon. A 'constrained constructivist' approach is used through which it is argued that in addition to people's constructions of nature, nature retains an inherent physicality. Social constructions of nature are explored through the examination of the Foxton Loop, a cutoff meander bend on the Manawatu River. The Save the Foxton River Association contested the changes to the Loop through a petition to Parliament in 1986. They sought to re-establish a flow through the Loop to benefit Foxton and the greater Manawatu region. The way in which the two primary groups, the Manawatu Catchment Board and Save the Foxton River Association constructed the river environment is discussed, and how these constructions were used to legitimate their positions within the conflict is highlighted. Discourse analysis of key texts and semi-structured interviews is used to determine how nature was constructed. The Save the Foxton River Association drew from a Judeo-Christian perspective, which identified 'right' and 'wrong' nature, and a conventional Western discourse which understood nature primarily as a resource. The Manawatu Catchment Board also utilised this latter perspective, but within the context of a scientific worldview that upheld them as the 'managers' of the river environment for the good of the Manawatu Region. The Manawatu Catchment Board and Save the Foxton River Association differed in their interpretations of 'true' nature, although a technocentric worldview of nature underlined both of their arguments regarding the Loop. These technocentric ideas were used in opposition to each other. It is argued each of these perspectives were inscribed with differing amounts of power which defined their influence in the debate. The thesis concludes with the suggestion that a balance between a constructionist viewpoint and one that acknowledges the inherent physicality of nature may assist in creating an approach to nature which ensures its intrinsic value is not threatened.

Acknowledgments

On the wall of my study is a magnificent picture of Mount Taranaki taken by Craig Potton during what appears to be a midwinter sunset. I am reminded of the exquisite beauty of nature in all its forms and henceforth a reason for this project. This project has been a long time in the making and I have many people to thank. Firstly, to my chief supervisor, Dr. Juliana Mansvelt who has tirelessly worked to help me through the system and has always had an encouraging word. Thank you for your patience and assistance in all aspects of this work. Sincere thanks must also go to Mr. Geoff Thomas, Dr. Lawrence Berg and Mr. Richard Heerdegen for your involvement with this project, ideas and other assistance. I also need to thank those people who provided sources of information during the course of this project, particularly those people I interviewed and those who assisted with archival and other data retrieval. Thanks to the Manawatu-Wanganui Regional Council and Massey University Research Fund for their financial assistance.

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List Of Abbreviations

SFRA	Save the Foxton River Association
MCB	Manawatu Catchment Board
CDCB	Central Districts Catchment Boards
MWRC	Manawatu-Wanganui Regional Council
FBC	Foxton Borough Council
MORB	Manawatu-Oroua River Board
PWD	Public Works Department
SCRCC	Soil Conservation and Rivers Control Council
IALGSC	Internal Affairs and Local Government Select Committee
NWSCA	National Water and Soil Conservation Authority
MAF	Ministry of Agriculture and Fisheries
MWD	Ministry of Works and Development
MFE	Ministry for the Environment
RMA	Resource Management Act
OCHR	Office of the Clerk of the House of Representatives

Chapter One: Introduction

1.0 Introduction

The focus of this thesis is the social construction of nature and how conflict can arise from different social constructions of the same 'natural' phenomenon. A cutoff meander bend on the Manawatu River in New Zealand provides the subject of my thesis (see Figure 1). Known as the Foxton Loop, this was the centre of debate during the late 1980s and early 1990s primarily between two groups - the Save the Foxton River Association (SFRA) and Manawatu Catchment Board (MCB)¹. I aim to identify how nature, represented by the Loop, was socially constructed by these groups during this period, how these constructions were important and were used to legitimate the 'agendas' of the groups involved. I argue that each of these groups constructed nature technocentrically (see Section 1.4). Technocentrism refers in this context to the "*official, dominant set of attitudes towards nature and environmental issues in modern Western society*" (Pepper 1996, 124, Original Emphasis). It is fundamentally an approach which encourages scientific, objective and rational responses and planning towards nature, and is founded in the scientific revolution and Judeo-Christian thought. Nature, represented by the Foxton Loop was constructed on the basis of similar use values, but with opposing desires. Technocentric valuations of nature were used in opposition to each other in the belief that nature could perform specific functions for the MCB and SFRA. While these constructions of nature occurred similarly (in using technocentric approaches), conflict still occurred. Each group believed their arguments were 'right', and constructed what they believed was 'true' nature. Their arguments were coherent within their own constructions. As a result, a satisfactory resolution was a difficult goal to attain.

¹ The Manawatu Catchment Board (MCB) changed its organisational structure twice during the course of the Foxton Loop conflict. The MCB existed from 1945 to 1987, when the organisation combined with the Rangitikei - Wanganui Catchment Board to become the Central Districts Catchment Boards (CDCB). Finally, local government restructuring saw this organisation become the Manawatu - Wanganui Regional Council (MWRC) in 1989. I will use the acronym, MCB, throughout the course of my thesis to represent all three organisations. The MCB was historically the most involved with the Loop conflict.

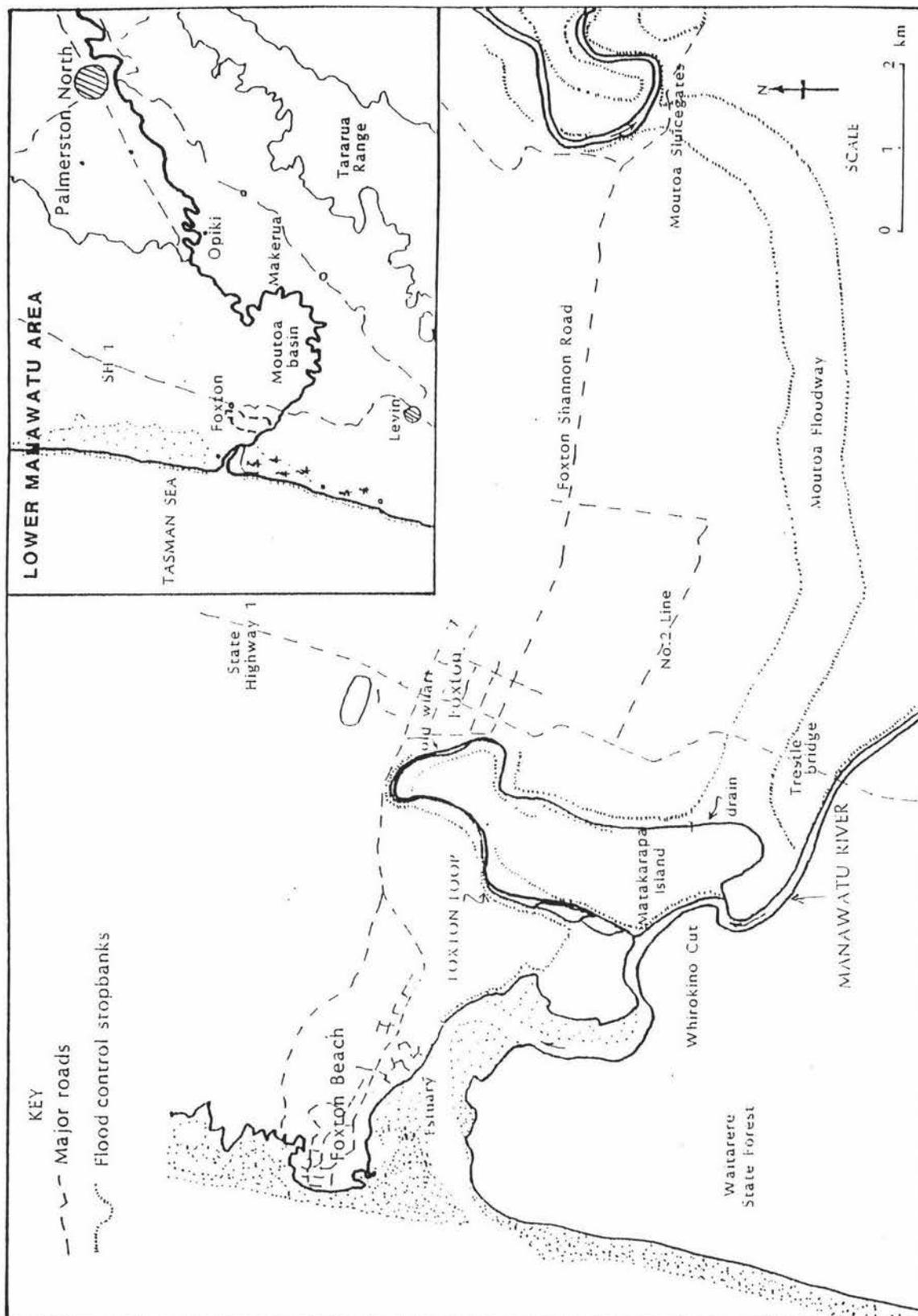


Figure 1: The Foxton Loop (Actual Loop outlined in blue)

(Source: Central Districts Catchment Boards 1989 Foxton Loop Flow Improvement, Central Districts Catchment Boards Report No. 80, Palmerston North, p. 2)

Why is a topic like this important? Essentialist portrayals of nature commonly associate nature with entities such as mountains, rivers, animals and other wildlife. Historically, nature has been commonly understood as something that exists independently of people. Nature has been 'out there', with people fundamentally separate from nature. Today, nature commands significant attention on several levels. Whether a whale stranded on a Golden Bay beach, scientific reports outlining further enlargements in the ozone hole or apocalyptic predictions of environmental degradation, nature has been constructed as both under threat and as threatening the very survival of human life. Nature has been represented as the home of species, as a 'force' to be reckoned with, as conquerable, and as inherently useful to humankind. Hence, nature's portrayal is closely associated with its treatment and representation by groups and individuals. Recent literature (Johnston 1989, Mannion and Bowlby 1992, Murphy 1994) has recognised the huge role that people, through excess and ignorance, have played in these problems. This recognition has aided awareness of the effects people can have upon their environments - local, regional and global. It has also fostered an escalating desire for action, and environmental groups, environmental education and scientific investigations have blossomed.

Hence, my interest in this area stems from a desire to understand how nature is represented, and the manner in which these constructions are utilised in the pursuit of 'improved nature'. An understanding of the social construction of nature in particular localities may assist in improving the treatment of nature. I draw from a social constructionist approach (see next Section). Social constructionism seeks to 'unpack' essentialist categories such as 'nature' in an attempt to create improved understanding and greater opportunity for analysis. It also aims to uncover what power relations are at work in creating particular constructions of nature and how these are hegemonically used to enforce certain discourses, while ignoring others. While the Loop conflict failed to command the attention of more global environmental issues such as climate change, global warming and the ozone hole, it is only as understandings of nature are recognised and changed on a local level that any hope for the global environment can be fostered.

1.1 A Social Constructionist Position

My thesis uses social constructionist thought as its theoretical foundation. The rise of this approach in the social sciences during the last thirty years is directly associated with a dissatisfaction with 'traditional' ways of knowing, especially those promoted through the 'natural' sciences. In the social sciences, social constructionism has been strongly advocated from within the confines of psychology and sociology. Its application in geographical debate has been stimulated particularly from authors within the 'new cultural geography' (Duncan and Ley 1992, Jackson and Penrose 1993, Berg and Kearns 1996). I utilise a variant social constructionist approach. My argument rests on the pretext that nature *is* socially constructed, but it also simply exists. Hence, I argue from what could be labelled a 'constrained constructivist' position (Hayles 1995) and one that acknowledges the existence of an 'external realism' (Searle 1995). I will discuss these two ideas in Section 1.2.

Social constructionism regards meaning as inscribed in the world in a never ending and dialectical process of meaning production. Sarbin and Kitsuse (1994, 1) use an analogy about baseball umpiring to distinguish constructionism from other philosophical viewpoints:

Three baseball umpires are reflecting on their professional practice of calling balls and strikes. The first, a self confident realist says "I call 'em the way they are", to which the second who leans toward phenomenological analysis says "I call 'em as I see 'em" and the third [a constructionist] closes the discussion with "They ain't nothing until I call 'em".

This captures the essence of constructionist thought, in that people categorise and describe reality first, rather than reality being defined before social interaction. As a theoretical viewpoint, constructionism focuses on the categories by which reality is understood - "...social construction theory is concerned with the ways in which we think about and use categories to structure our experience and analysis of the world" (Jackson and Penrose 1993, 2). What is accepted as 'real' - 'our' familiar world - is an artifact of how culture is defined and subsequently shapes society (Bash 1995).

1.1.1 Central Tenets

Burr (1995, 3-5) identifies four central tenets of social constructionism. These are:

- 1) A critical stance towards taken for granted knowledge.
- 2) Historical and cultural specificity.

3) That knowledge is sustained by social processes.

4) That knowledge and social action go together.

While Burr argues these are essential components of a definition of social constructionism, she also suggests that there is not one isolated feature which identifies a social constructionist position. Rather, advocates of the social constructionist approach are linked by a kind of 'family resemblance' (Burr 1995).

I will look at each of the above four central tenets in turn. Social constructionism "cautions us to be ever suspicious of our assumptions about how the world appears to be" (Burr 1995, 3). The categories that describe and account for the world are frequently culturally fixed in people's minds as 'natural'. Constructionism challenges the notion of 'given' and indivisible categories, which imply 'knowledge' is not subject to criticism, but is universally accepted. The critical stance social constructionism takes towards this 'taken-for-granted knowledge' is in direct response to the perceived inadequacy of empiricist approaches to understanding reality. These approaches talk of a reality that exists outside of observation and empirically derived formulas. Constructionism argues knowledge is created through social interaction and not on unbiased, observational platforms. Each of these 'knowledges' represents a single position amongst a potentially infinite number of positions.

Meaning, therefore is partial. Partiality intrinsically involves a limited meaning and a built in bias to knowledge. Constructions of reality are strongly related to what are understood as 'truths' about something. Each person is responsible for constructing the 'world' in unique and constantly changing ways. One viewpoint will never totally understand 'reality', because not only does this 'reality' continually change, but it is also understood through selective replication of that 'reality'. Clifford suggests that this has resulted in a major movement in the construction of 'knowledges':

...a conceptual shift, 'tectonic' in its implications, has taken place. We ground things, now, on a moving earth. There is no longer any place of overview (mountaintop) from which to map human ways of life, no Archimedian point from which to represent the world.

(Clifford, cited in Barnes and Duncan 1992, 3)

In this way, nothing can be represented as 'fixed' or 'totally known', but rather everything exists within a patchwork of interdependent relationships that are all in the process of being 'made'. Indeed, Bash (1995, 14) surmises that:

..to apprehend something in its totality would require that we regard it from every conceivable point of view (to say nothing of those vantage points that we have not yet even begun to imagine) and, moreover, that we do so simultaneously.

Following from this point, social constructionism argues that understanding of the world is historically and culturally specific. Knowledge is dependent on both its cultural and historical context - "the terms and forms by which we achieve understanding of the world and ourselves are social artifacts, products of historically and culturally situated interchanges among people" (Gergen 1994: 49). Meaning is not constant, but changes according to historical time periods and cultural conditions. For example, it was once believed that earth represented the centre of the universe and everything, including the sun, revolved around it. Copernicus, in the fifteenth century challenged this notion and expounded the opposing view that the sun was actually the centre of the universe. His suggestion toppled foundationalist suggestions that had been unchallenged for years and were culturally fixed in people's minds. These ideas today are being further challenged. Any knowledge attained of something becomes an artifact of that culture and time. Hence, as Burr (1995, 4) suggests "we should not assume that *our* ways of understanding are necessarily any better (in terms of being any nearer the truth) than other ways" (Original Emphasis). The evaluative dialogue promoted through constructionism also "...open[s] the door to a fuller interweaving of the disparate communities of meaning" (Gergen 1994, 54). This evaluation gives respectability to other 'cultural enclaves'.

Thirdly, social constructionism promotes the idea that knowledge is sustained by social processes. People construct knowledge between them through lived experiences, relationships, beliefs, values, ideologies, and events. Each individual can lay claim to a different blend of each of the previously mentioned facets, hence the possibilities for knowledge are infinite. This obviously challenges the notion of objective truth, which proposes that knowledge lies outside of social relationships. At every point, understanding of what is real (and this in itself is socially constructed) is birthed in social

processes and interaction. Knowledge does not come from 'the world as it really is'. Gergen(1994) extends this further by arguing that individual knowledge has reached an impasse. The place of the individual in social relations is being rapidly eroded, and this 'method' of knowledge gathering is no longer sustainable. Hence, knowledge needs to be recognised as attainable only through communal relationships -

...words are, after all, passive and empty - simply sounds or makings of no consequence, yet, words are *active* insofar as they are employed by persons in relationship, insofar as they are granted power in human interchange. (Gergen 1994, 46-7, Emphasis Added)

Fourthly and finally, social constructionism promotes the idea that knowledge and social action go together. The way something is understood will nourish a certain social action, while excluding others. For example, prior to the value of wetlands being recognised they were effectively seen as wastelands, and were drained and cleared for development purposes. Appreciation of the role of wetlands in the hydrological cycle and as nurseries and habitats for wildlife has seen a strong movement to protect them and ensure they are maintained in a sustainable state (Hollis et.al. 1988). Both of these views have emanated from a historical period. They have resulted from certain constructions, and have nourished a certain social action - development or conservation.

Hence, social constructionists focus on one or more of the above ideas. Social constructionism promotes recognition that multiple meanings can exist, each of which may represent a 'truth' about the world for a particular individual or social group at a particular time and in a particular place. Indeed, as Pepper(1996, 4) states,

..such studies, of the 'social construction' of nature [or anything else] and society's relationship to it, all underline, then, the need to get below the surface in order to be thinking and acting effectively: to see ideas about nature in social and historical context.

1.1.2 Social Constructionism, Language and Discourse

In light of the above tenets, social constructionists argue that language and discourse are vital in knowledge construction - "when people talk to each other, the world gets constructed" (Burr 1995, 7). Language is seen by some as lying at the heart of all knowledge (Dear 1988). Indeed, "knowledge is portrayed as a social product dependant on the social practice of language to produce meaning" (Gandy 1996, 31). Language

provides the lenses through which the world is seen. A simple example may help clarify this idea. On one level, if I was to start calling a 'try' in a game of rugby union 'a goal', I would probably be labelled a heretic (at least, by most rugby fans!!). The term, 'try', only attains its meaning, in this instance, through its relationship with the sport of rugby union, and the people who use it as language to describe that aspect of the sport. The signification associated with the term is only achieved within that context and those relationships.

Language is important because "our conceptual orderings, it is claimed, do not exist in the nature of things but instead reflect our philosophical systems" (Dear 1988, 266). Language is used to maintain the hegemony of 'privileged' discourses. It is also frequently cast as a system of differences or binaries (Gergen 1994). For example, man is contrasted to woman, culture to nature, warm with cold and so on. This implicit negation is seen as significant to understanding - "whether a religion, a political theory, or a scientific perspective, all are distinguished by virtue of what they are not" (Gergen 1994, 9). Phenomena are categorised according to their acceptability into certain categories. Language is structured into a number of discourses which both 'control' how language is understood, and are constituted in and by language. Hence, "the meaning of any 'signifier' depends on the context of the discourse in which it is used" (Burr 1995, 46).

Discourses are 'signification systems' which function to produce certain knowledges (Berg and Kearns 1996). They operate as coherent systems of meaning about people's understandings of objects (Parker 1990). They assist in making the world meaningful and intelligible to people and are frameworks for debating the value of one way of talking about reality over other ways (Fairclough 1992, Gregory 1994). Barnes and Duncan (1992, 8) define discourse as "frameworks that embrace particular combinations of narratives, concepts, ideologies and signifying practices, each relevant to a particular realm of social action". Discourses operate forcefully, in some cases shaping and reshaping geographical and physical landscapes. They provide "a frame of reference, a way of interpreting the world and giving it meaning that allow some 'objects' to take shape" (Burr 1995, 57), while other objects may simply disappear. Discourses are situated within already existing discourses, which act to 'constrict' and reproduce

meaning. Meanings may change as a result of the discourse(s) in which they are embedded. Despite this apparent coherence of meaning, discourses are still partial. For example, while people may talk of a discourse of 'wetlands as wastelands', the discourse of 'wetlands as valuable ecosystems' may represent another schema. Each attains its power through different historical and cultural specificities. Each represents a partial representation of the entity in question. They do not depict the final 'truth' about wetlands. They operate as broad, but loose frameworks, which are used by people to structure their reality. Numerous discourses are at work in any set of social relations (Foucault 1984). Each of these strive to represent or construct social relations in different ways and are constructed by social relations. Separate discourses bring different issues into focus and have different implications for what occurs. Discourse takes place in history, and "feeds off the social landscape, the social groups, the material interests already constituted" (Wetherall and Potter 1992, 86).

Discourses are commonly realised in 'texts', through language. The specific language of 'texts' is labelled 'rhetoric', while 'texts' refer to the whole. In the context of this project, I focus on a number of 'texts' use by the parties in the debate. Through these 'texts', particular discourses of nature operated to legitimate each of their arguments. While 'texts' may be commonly thought of as written, the concept also includes visual and other verbal portrayals of objects.

Some social constructionists argue that nothing exists outside of discourse. These radical viewpoints uphold language as all important. They suggest that "all the objects of our consciousness, every 'thing' we think of or talk about, including our identities, our selves and those of other people (whatever 'self' may mean), are constructed through language, manufactured out of discourses" (Burr 1995, 57). While my thesis does not argue this line of reasoning, it does acknowledge discourse as important in constructing people's understandings of nature and the world. I argue that while language is important, it is not everything (Hayles 1995).

1.2 'Constrained Constructivism'

I draw from the position of 'constrained constructivism' (Hayles 1995). This position suggests that the viability of representations is tempered by constraints, rather than the radical constructivist view where everything people think and know is a construction. Constraints "delineate ranges of possibility within which representations are viable" (Hayles 1995, 53). Gravity is cited as an example -

No matter how gravity is conceived, no viable model could predict that when someone steps off a cliff on earth, she will remain spontaneously suspended in mid air. Although the constraints that lead to this result are interpreted differently in different paradigms, they operate universally to eliminate certain configurations from the realm of possible answers. Gravity, like any other concept, is always and inevitably a representation. Yet, within the representations we construct, some are ruled by constraints and others are not.
(Hayles 1995, 52)

Gravity presupposes that a person or object will immediately take the quickest passage to the ground. Hayles does not suggest that this represents the 'truth', but argues that constraints delineate results that are *consistent*.

Hayles stresses the importance of the concepts of interactivity and positionality.

Interactivity refers to the idea that the world is known because people interact with it. A person's 'position' in this interaction is important, because their location in specific cultures and historical understandings contingently affects their ability to understand the world - "...we interact with the world not from a disembodied, generalized framework but from positions marked by the particularities of our circumstances as embodied human creatures" (Hayles 1995, 48). Because representations are subject to constraints, some will maintain the consistency needed to be called 'valid', while others will not. Hayles argues for a 'middle of the road' position between views which promote the world as 'out there' and a radical constructionist approach which argues that objectivity is a fallacy and that "everything we think we know, including 'nature' is a construction emerging from historically specific discursive, social and cultural conditions" (Hayles 1995, 47).

I suggest that the above approach is useful when considering a concept like nature. A fundamental difficulty exists between denial of a reality independent of people, and one that suggests that the construction of all 'reality' is dependent on people. Can this be said about nature? Does nature exist beyond people's constructions? Is nature different from

people? While retaining the fundamental tenets of a constrained constructivist position, I argue that at some historical point, a reality must exist independently of human constructions. This is particularly relevant for an entity such as a river, which retains a physicality, despite people's representations of it. While represented through the word and concept of 'physicality', this does not deny that physicality exists. Searle(1995) argues for the idea of 'external realism'. He defines this as "the world (or alternatively reality or the universe) [which] exists independently of our representations of it" (Searle 1995, 152). He suggests two categories of facts. Brute facts represent those which require no human institutions for their existence - "in order to *state* a brute fact, we require the institution of language, but the *fact stated* needs to be distinguished from the *statement* of it" (Searle 1995, 2, Original Emphasis). Although people state what nature is, how it is constructed and how the social world impacts on it, this does not deny the fact that nature exists.

Secondly, institutional facts require human institutions for their existence. For example, for a marriage licence to retain signification, there needs to be the social institution of marriage. People live in a world shrouded by social reality, most of which is largely taken for granted. One dives into a swimming pool, expecting to hit water, one puts a card in an ATM, expecting the card to be accepted and to conduct a transaction, one places sugar in a cup of tea, expecting that it will become sweeter. The functions instituted in particular entities become secondhand to people. These institutional facts represent parts of the world where a social constructionist position can be comfortably 'applied'. Their construction is inherently reliant upon social institutions. While a social constructionist position is anti-realist, arguing that the world cannot exist independently of people's representations of it, Searle argues for an approach to realism which "suggests that there is a way that things are that is logically independent of all human representations. Realism does not say how things are, but only that there is a way that they are" (Searle 1995, 155).

To help clarify these ideas, an example may be useful. To 'get away from it all', I decide to go for a canoe on the Foxton Loop. The Foxton Loop is a body of water that flows in a channel at the back of Foxton township. I hire a canoe and paddle onto the Loop,

which is a muddy brown colour. I enjoy the sensation, the peace and tranquillity of paddling on the loop, away from noise, the telephone and other people's demands. This patently 'normal' scene is replete with meaning. The very idea of 'getting away from it all' suggests an escape from something else which would normally occupy my time. I undertake a transaction, where in return for something which contains metaphysical value (i.e. money) I am allowed to use somebody else's possession for my own entertainment. I derive this entertainment from paddling on the Foxton Loop, which can be discussed in a number of ways. It is given a name, which identifies it as the Foxton Loop. This also identifies an inherent relationship with the township of Foxton. It also draws from a hydrological discourse, 'Loop' and 'flows in a channel', which describe features of this nature. It is also personified as 'a body of water'. 'Water' is identified as its chief component. Again, water can be represented in a number of ways. It may be clean or dirty water, water which contains waste or sediment. It may be constructed chemically as H₂O or physically as water, ice or steam. However, in order for any representation, there must be something to represent.

I suggest, that without representation, the world would still exist and be unaffected. If I die tomorrow, the Foxton Loop will not go with me. Indeed, if human life is wiped out, the Foxton Loop will not disappear with it. What will disappear are the language-dependent factors used to represent the Loop, which Searle (1995) labels observer-relative. For example, the Loop is dirty or the Loop is overgrown. The intrinsic facts (Searle 1995) associated with the Loop will remain, such as the Loop is a body of water and as flowing in a channel. The Loop's construction will rely in large part upon discourse and language. However, this does not account for the Loop that is simply there. Inevitably, there will be differing representations, but these will still be of the same 'reality'. Without such a reality, how can the concepts by which it is understood be applied? As Searle suggests:

all representation occurs within a set of representations and within some representational system. Hence, any representation of the relation between the set of representational states and the representational system, on the one hand, and the reality represented, on the other, also occurs within some representational system. But so what? It simply does not follow from the fact that all cognition is within a cognitive system that no cognition is ever directly of a reality that exists independently of all cognition....Indeed, to suppose it does follow seems to be a mistake of the same form as the mistake committed by old-time idealism.

(Searle 1995, 175)

Hence, my position rests in these ideas. People *are* an inherent part of nature. I come from natural processes and upon my death my body over time will be reduced to dust. I am a part of the 'natural world'. I therefore construct nature from a position within nature. However, is nature separate in any way from people? People have the capacity to make moral decisions, whereas nature can only operate according to 'natural law'. A landslide does not think about the hundreds of people it may kill when ploughing down a hill. A praying mantis does not recognise the 'folly' of eating its mate. The wind does not consider the damage it may cause to property. While I argue this difference, I also acknowledge that morality itself is also a construction. It rests in human belief systems, culture and historical interaction. However, to then argue that nature and everything attributed to nature is solely constructed by people ignores the constraints which nature imposes on this relationship.

In addition, I acknowledge that "value-laden presuppositions operate from the moment one begins to speak or write" (Hayles 1995, 47). In this I recognise the influence of my own Christian values and beliefs will inherently affect how I construct and represent something. In regards to nature, I believe that God is ultimately responsible for creation, rather than a theory which suggests everything has been created out of nothing. If God does occupy this position, then at some historical point, according to creationist discourse, it has existed apart from human influence and representation. However, at the point of human contact with the earth, the theoretical suggestions proposed by social constructionist thinking become increasingly relevant. This also suggests, that if for any reason humankind is extinguished, nature will still exist, independent of all construction, thoughts, perception, belief and so on.

1.3 Social Constructions of Nature

I seek in this thesis to understand the social construction of nature in the Foxton Loop conflict. I acknowledge the importance of thinking about nature in the fashion I have outlined above, but also acknowledge the essential role that people play in nature's construction. Meaning *is* inscribed in nature in a dialectical process of meaning production and reproduction. As Lease (1995, 5) states "we and our world may well be real, but intelligible access to that reality is constructed and produced and ultimately

incomplete". To attempt a definition of nature is a self-defeating objective and not the purpose of my thesis. The people-nature relationship has been the focus of vast quantities of literature in geography. Nature has also been discussed extensively in other schools, particularly in cultural and ecological circles. It is important to contextualise the familiar ways by which nature is defined and understood. Emel (1994) suggests three commonly accepted meanings for nature. It is "the essence of something", "areas unaffected or unaltered by human action" and "the physical world in general, as the totality of its phenomena or processes as a topic of study" (Emel 1994, 408). Recently, some geographers have applied social constructionist thinking to the understanding of nature (Simmons 1993, Harrison and Burgess 1994, Anderson 1995). These approaches have sought to move the definition of nature from a scientific worldview that has commonly constructed nature as autonomous and 'outside' of social relations (Haraway 1991).

Scientific knowledge of 'the natural' is a socially constructed interpretation that exists within an already socially constructed object of inquiry (Bird 1987). Nature as socially constructed encourages a diversity of constantly changing meanings and recognises that "the human perspective is only one voice in a rich chorus of experience" (Hayles 1995, 60). Soper (1995,2) states it well:

...nature refers to the object of study of the natural and biological sciences; to issues in metaphysics concerning the differing modes of being of the natural and the human; and to the environment and its various non-human forms of life. The natural is both distinguished from the human and the cultural, but also the concept through which we pose questions about the more or less natural or artificial quality of our own behaviour and cultural formations; about the existence and quality of human nature; and about the respective roles of nature and culture in the formation of individuals and their social milieu. Nature also carries an immensely complex and contradictory symbolic load; it is the subject of very contrary ideologies; and it has been represented in an enormous variety of differing ways.

Soper (1995) argues that these ideas of 'nature as cultural construct' and 'nature as material reality' need to be held in 'productive tension'. Language is important within these dialectical understandings of nature, because language shapes both the output and input of our individual and collective ponderings. However, as she states:

...while it is true that much of what we refer to as 'natural' is a 'cultural construct' in the sense that it has acquired its form as a consequence of human activity, that activity does not 'construct' the powers and processes upon which it is dependent for its operation. And while it is also true that our discourses of nature are constitutive of a series of conceptions and representations through which our policies on the environment are necessarily mediated, it is not the discourse of 'global warming' or 'industrial pollution' that has created the conditions of which it speaks. (Soper 1995, 249)

Discourse provides a signification system through which people represent and construct nature. It cannot act, as the above statement suggests, to provide the active mechanisms by which nature works or the physical entities that are part of a discourse of, for example, global warming.

McLaughlin (1993) argues from a perspective which identifies the economic systems within which people work and live as the primary determinant for people-nature relations. He suggests two key meanings of nature held by Western societies. Firstly, nature is everything. It includes all sorts of human activity, including values and ideas. Secondly, humanity and nature are separate, and distinct from one another. McLaughlin concludes similarly with Soper (1995) that both concepts of nature need to be retained, because they contain both inherent validity and inherent problems. People are inclusive, yet exclusive of nature, and this impacts on the treatment and understanding of nature. In this respect, people occupy a unique place in nature:

...just as we are surely within nature, we are also, just as surely, a distinct sort of creature, not to be simply identified with 'all that is'. We act on nature and transform it, creating artifacts - manufactured things and whole environments. (McLaughlin 1993, 5)

I argue the MCB and SFRA drew upon a technocentric discourse to represent nature, although this was used in opposing ways. The power to enforce technocentric discourse draws from Judeo-Christian ideas about nature and the scientific revolution, which I outline in Section 1.4.1.

1.4 Ecocentrism/Technocentrism

As can be expected, opinions over how people live within and look after nature, while also being an inherent part of nature vary widely. The ideas and practices associated with humankind's relationship with nature are a plethora of shades of green in Western societies. Generally, technocentrism and ecocentrism can be used to represent the ends of the continuum upon which most environmental thought is located, although boundaries between the two are not strictly defined (O'Riordan 1981b, Pepper 1984, 1996). These two categories provide a useful typology for discussing nature in the Foxton Loop conflict. As Palmer (1995, 14) suggests "they tug in opposite directions, an anthropocentric approach dictating human utility as the only touchstone, an ecocentric

approach emphasising the inexorable laws of nature which humans will ignore at their peril". A summary of the major facets of these approaches is detailed in Table One.

A brief review of each approach will be given here. Pepper (1996) provides a comprehensive look at the development of ecocentric and technocentric thought - societal roots, historical development, differences, and the general implications of each approach for society. The ecocentric approach (O'Riordan 1981b) or ecological environmentalism (Pepper 1984) is strongly nature oriented. This perspective developed throughout the eighteenth century, particularly as people began to realise the impacts of their actions upon animals and plants. Ecocentric views focus on the idea that the natural world maintains a value in its own right. They encourage a holistic approach to nature. A non scientific strand of ecocentrism grew out of moral and aesthetic understandings to the conquest of nature. It fosters a strong romantic element, with people 'guardians' over all aspects of the environment. Alternatively, a scientific strand promotes the idea that there are limits to the capacity of the earth to cope with human demands. Ecocentric philosophy encourages the notion that nature should dictate human choices with an expectation this should be a criterion for human decision making on nature. This is manifested in an extremely strong and persuasive environmental movement which is serious about protection.

O'Riordan (1981a) suggested that ecocentrists can be divided into two groups. Communalists believe an ecocentric approach can be achieved through self-reliant communities based on renewable use of resources and appropriate technologies. Gaianists draw their philosophies from James Lovelock's (1979) ideas on the Gaia hypothesis. They base their philosophies on an approach which encourages deep ecological thought (McLaughlin 1993, Sessions 1995). Nature is presented as having equal rights with people. Ecocentric philosophies have developed largely in response to the anthropocentric approaches which have placed people at the apex of the natural world. They advocate a return to initial ideas of the world understood as a living organism.

Alternatively, technocentric ideologies "value the environment insofar as it provides for human needs and is related to the imperialist tradition" (Bowlby and Lowe 1992, 166).

TABLE ONE: Technocentric/Ecocentric Approaches to Nature

ECOCENTRIC	TECHNOCENTRIC
<ul style="list-style-type: none"> • Need for power to be redistributed towards a decentralised economy emphasising informal economic and social transactions and the pursuit of participatory justice. • All life forms have equal right to existence, along with human beings. • Resources are finite, therefore use must be controlled and conserved. • Spiritual and scientific endeavour can contribute to understanding of the earth. • Earth a living organism which maintains an environment fit for life by complex feedback mechanisms. • Overconsumption and waste in rich countries the main cause of poverty. • Radical social, political and economic changes needed. • Need for a 'natural morality', a set of rules for human behaviour within the constraints of natural ecosystems. • Need for limits to human activity • Promotes protection of options, by maintaining diversity and stability of ecosystems. • It promotes self reliance and self sufficiency, with an emphasis on smaller communities to respond to environmental dilemmas. • Two main strands of ecocentric thought which each emphasis different aspects. Both approaches exhibit little faith in technology and materialist solutions promoted by technocentric approaches. They are: 	<ul style="list-style-type: none"> • Existing power structures should be retained, but a demand for more responsiveness and accountability • People superior to other life forms • Resource replacements will be discovered as non renewable resources are depleted. • Faith in the ability of technology, rational thought and scientific inquiry to solve environmental problems. • Earth functions as a giant machine. • Earth can be managed and controlled to create sustainable wealth • Poverty caused by a lack of technology and overpopulation. • Favours Business-as-usual approach • Faith in ability of people to make the 'right' decisions to control nature. • Human technological developments allow for unmediated development of human activities. • Trade, economic development and growth helps conserve scarce resources and provides finance for solutions to any environmental dilemmas. • Two main strands of technocentric thought. These emphasis the ability of people and existing social, institutional and scientific structures to 'manage' the environment. They are:
<ul style="list-style-type: none"> • Gaianists/ Deep Ecologists - Value in the intrinsic rights of nature and belief in the essential need for coevolution of human and natural ethics. Confidence that ecological laws should dictate human morality and some areas should have biorights or the right to exist unmolested. • Communalism/ Self-Reliance Soft Technologists - Faith in the cooperative capabilities of society to establish self-reliant communities based on renewable resource use and appropriate technologies. Emphasis on small scale identity to promote environmental preservation. 	<ul style="list-style-type: none"> • Accommodators/ Environmental Managers - Growth can continue if properly organised. This can occur assuming possible improvements to existing institutions and approaches and their continuing adaptability. Accommodation of environmental demands can occur at national and local level. • Cornucopian/ Intervention - Faith in the application of science, market forces and managerial ingenuity. People have the ability to intervene in nature to create economic growth and overcome any environmental problems.

(Based on O'Riordan 1977, 1981a, 1981b, Johnston 1989, Bowlby and Lowe 1992, Job 1995, Pepper 1996)

These approaches dominate capitalist societies, and rely particularly upon the natural sciences. The overriding theme of technocentrism is the conquest of nature.

Technocentric approaches favour a 'business as usual' outlook, having faith in the ability of technology to solve environmental problems. In this way, people are represented as in a position of authority, with the earth regarded as a machine system which can be understood and controlled through scientific research (Job 1995). O'Riordan (1981a) again splits the adherents of this approach into two groups. Cornucopians represent those who rely on the application of science, technology and managerial expertise to sort out environmental problems. Accommodators or environmental managers are those who tend to favour more innovations in procedure, and where growth continues if properly organised.

1.4.1 Technocentric Roots

A technocentric discourse draws upon two fundamental roots (Pepper 1996). The first rests in Judeo-Christian thought where people are placed at the highest apex of creation and nature is subordinate to and separate from people (Johnston 1989, Galvin 1993). Therefore, people are given the 'right' to change nature to their ends. There has been significant debate over the blame attached to this perspective for today's global environmental crisis. White's much cited 1967 article laid the blame for environmental problems firmly at the feet of Judeo-Christianity. The emergence of Christianity resulted in declining significance attached to the 'nature religions'. This softened the reverential treatment of nature which deified parts of nature as gods (Glacken 1967, Sessions 1995). White believed that Judeo-Christianity heavily influenced the way the environment had been treated by people - "God planned all this explicitly for man's benefit and rule: no item in the physical creation had any purpose save to serve man's purposes" (White 1967, 1205). Therefore, Judeo-Christian tradition created the expectation where nature was to be exploited for people's usage. Western culture drew upon a moral validation to exploit nature. These attitudes to nature's treatment were so deeply ingrained in Western society that their removal, even in an ostensibly neo-Christian age, was extremely difficult.

A number of authors have refuted White's statements, taking the opposite tack that the Judeo-Christian stance is sympathetic and positive towards nature (Doughty 1981, Attfield 1983, Galvin 1993). These authors argue that while early Christian commentators may have preached an anthropocentric worldview, this worldview was cultivated through scientific and technological developments. The Scientific Revolution upheld the idea of nature as machine, where nature was understood as operating according to specific laws. It encouraged a cause-effect typology whereby a certain input would produce a pre-determined result. Nature was understood and managed scientifically, objectively and rationally. It was inherently separate from human beings and once understood was open to control and manipulation. In this way science became "the arbiter of most environmental and many social issues: it [was] appealed to as a source of objective truth on which to base decisions" (Pepper 1996, 146). This viewpoint was justified on the basis of 'success'. If it worked, society had made further steps forward. The following quote summarised this dominant worldview,

..one only has to look at the things science has made possiblesatellite communication, organ transplants, bombs that can destroy entire cities. These things suggest that, for good or ill, scientists get their sums right. Science has much in common with common sense.
(The Economist 1981, Cited in Pepper 1996, 146)

Both of these ideas were important in underwriting technocentric discourse. Within this context, technocentrism provided an important framework to socially construct nature in the Foxton Loop conflict. These understandings of nature were utilised in differing ways by the SFRA and the MCB.

1.5 Conclusions and Thesis Structure

Chapter One has provided a synopsis of the approach I have taken in this thesis and the various theoretical philosophies I have drawn upon. I take a constrained constructivist approach to the understanding and interpretation of nature. I recognise that "meaning is not inherent in the nature of things" (Greider and Garkovich 1994, 2). Meaning is inscribed in nature and people act to create and re-create nature. However, while the importance of the symbolic load bestowed in nature and of discourse cannot be denied, I argue that nature retains a physicality despite people's representations of it. I disagree that the world simply exists as an arena of 'duelling texts' (Grenz 1996).

I argue that during the Foxton Loop conflict, nature was constructed technocentrically by both the MCB and SFRA. These groups drew upon particular discourses of nature to legitimate their positions. As a result, technocentric discourses of nature were used in opposition to each other. Hierarchies are evident in nature, with certain animals exhibiting power over others, and natural features such as volcanoes periodically reminding the rest of nature that they exist. In a similar way, the result of the Foxton Loop conflict depended on the strength of the discourses involved. This strength was a result of two notions. Firstly, the eventual result which decided the conflict and secondly the 'power' invested in particular discourses. These notions operated to legitimate power structures and brought an end to the Foxton Loop issue. While both the SFRA and MCB drew upon similar bases in their constructions of nature in the Loop conflict, the SFRA failed to achieve the desired goal. The SFRA construction of nature failed to invalidate the arguments presented against it. While the 'place' of Foxton and the Foxton Loop provided the subject of discussion, its discursive construction operated to legitimate what decisions were made. The SFRA concentrated on the historical value attached to the Loop and how this was indispensable to Foxton's identity. It also drew upon a moral discourse which identified what was 'right' and 'wrong' in nature. The MCB drew primarily from a scientific and rational perspective including engineering discourse which identified the value they placed in the Loop and strongly dictated that the SFRA action was likely to result in failure. In addition, both groups represented nature from within a conventional Western discourse of nature. The Loop was constructed differently by both the SFRA and the MCB. It did not have the capacity to speak its own partial 'truth', and continued to flow, fulfilling its hydrological functions of transporting water, sediment and waste to the Tasman Sea.

This initial chapter has concentrated on the theoretical background to social constructionist thinking, nature and the position I have taken in this thesis. Chapter Two concentrates on setting the Loop conflict in its historical context. Chapter Three outlines the 'methodology' used. I utilised discourse analysis in the investigation of key 'texts' from both the SFRA and MCB 'sides' of the conflict. I also conducted and analysed six semi-structured interviews conducted with key individuals associated with the conflict. Chapters Four and Five concentrate on the constructions of nature by the SFRA and

MCB respectively. These groups represented the most prominent actors in the Loop conflict, which is the major reason for concentrating on them. The SFRA initially promoted the Foxton Loop issue and actively sought some form of restoration of the Loop. The MCB was responsible for the management of surface water in the Manawatu, including the Foxton Loop and the development of the lower Manawatu. Initially, the MCB was in the position of responding to the SFRA. However, this changed as it became the expert 'voice' in the conflict and the power relations reversed. The final chapter summarises and draws out this discussion and will provide some conclusions.

Chapter 2: Setting The Scene - The Foxton Loop Debate

2.0 Introduction

The Foxton Loop is a relatively minor part of nature. Eight to nine kilometres of river loop winds its way across the Moutoa basin. One end of the loop is cut off from the main Manawatu River, while the other end joins the Manawatu approximately a few kilometres from the Manawatu River estuary. The Loop has rated only minor attention in the national media, few academic articles have been written about it, and most people would probably question its 'aesthetic' beauty. In essence, it is a 'normal' part of nature. Yet, for the SFRA, the Loop provided the centre of attention. It represented an indispensable part of Foxton's identity. This chapter sets out to detail this conflict, noting particularly the agents who were involved and acted powerfully. A time line in Appendix One provides a comprehensive look at the development of the Loop conflict.

2.1 The Foxton Loop - Background

The foundations of the Foxton Loop conflict lay with the construction of the Whirokino Cut in the early 1940s, which isolated a portion of the Manawatu River that wound its way past the back of Foxton. This portion of the river became known as the Foxton Loop (see Plates 1 - 3). Local discontent with this situation resulted in a number of calls for restoration of the Loop. I concentrate on the actions of the SFRA, the majority of which occurred over a four year period from 1986 to 1989.

Early settlers saw flooding problems in the Manawatu as a major impediment to the development of the region. Floods occurred down the length of the Manawatu River, the most notable being the floods of 1880, 1897 and 1902 (Brougham and McLennan 1986). Several alternatives were considered to stem the flooding problems. The most viable alternative was the Whirokino Cut. This was proposed as early as 1908 by a Commission convened to investigate these flooding and drainage problems (Newnham 1953). Agreement on the Cut's construction was reached in early 1940, instigated by the actions

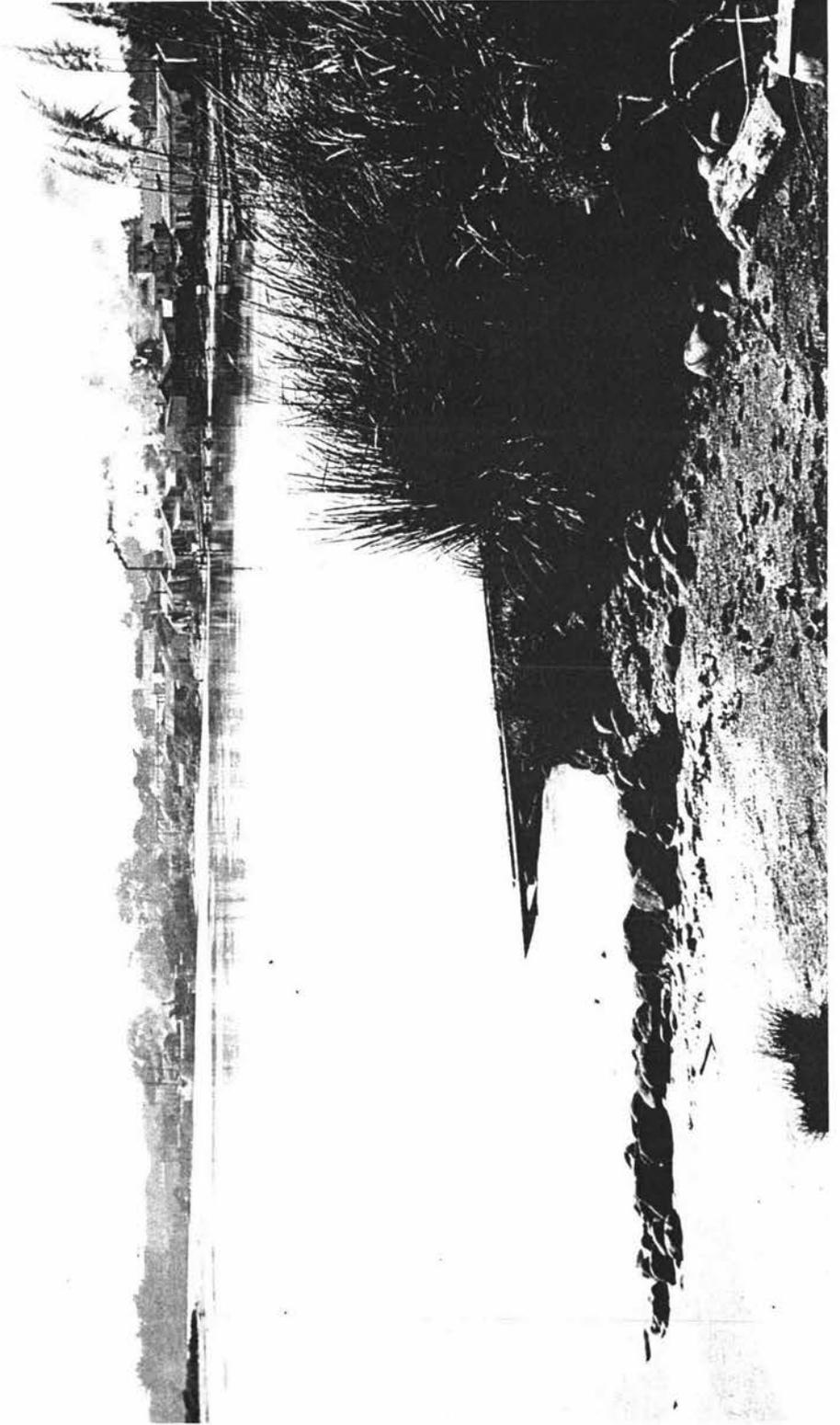


Plate 1: The Foxton Loop - Around 1900

(Source: Palmerston North Public Library Photo Collection)



Plate 2: The Foxton Loop - today (Source: Author)



Plate 3: The Foxton Loop - from the air (Source: Author)

(Foxton Loop is in the centre of the Photo, Manawatu River is in the centre left of the photo, and the Moutoa Floodway goes from the bottom right to centre left of the photo)

of the Manawatu - Oroua River Board (MORB) and Public Works Department (PWD).

It was seen as a vital cog of the Manawatu Flood Control scheme:

....it had been apparent that.....one of the fundamental requirements for a comprehensive scheme was a cut from the Foxton Loop either on the alignment of the present cut or somewhere in the vicinity....of all the major works which would improve flood control, the present Whirokino Cut has generally been considered as one of the most important and effective and one which could be done at a reasonable cost. (Newnham 1953, 2)

Construction of the Cut began in 1941. It was opened as a result of a retaining wall collapse on the March 25 1944. The final cost of the Cut was £20 635, ahead of the estimated budget figure of £31 500 (Whirokino Cut Commission of Inquiry 1953, 5). The 'officially' stated purpose was to "improve floodwater discharge by increasing the river's gradient and reducing the river's length" (CDCB 1989, 3).

However, plans for the Cut generated significant confusion during the 1930s. The PWD originally stated that the Cut was designed as a diversion channel, which would eventually scour to take the whole river (Newnham 1953). However, this was disputed by Foxton people as the key reason for the Cut's construction. The Foxton Borough Council (FBC) believed the Cut was to be constructed as a high level spillway that would retain most of the river flowing at the back of Foxton township. The Council appeared to support the Cut, not acknowledging its potential effects on Foxton township. While hydrological experts had warned of these effects, Foxtonians only recognised their severity following the Cut's construction. The FBC expressed concern at differences in the Cut's construction from original plans -

The Borough Council has had no notification of the alteration to the original proposal.....It may seem premature at this stage to express anxiety as to the ultimate effect of the cut on the portion of the river that flows through the town of Foxton, but the Council is naturally desirous of learning what proposals your Department has in mind to safeguard the sewage system of the town. (FBC 18/10/43, Letter to PWD)

The PWD acknowledged the changes, and suggested that sewage would not be adversely affected -

...The Whirokino Cut is very different from the proposal of September 1935. The work in hand is not a spillway but is an open cut.....it is anticipated that when the Cut widens enough to take the whole river, the Foxton Loop may close at its upper terminal, but the ebb and flow of the tide into what may become a large lagoon should be sufficient to keep this lagoon open at its lower end, and to provide dilution for sewage.

(PWD 28/10/43, Letter to FBC)

Particular concern was expressed over the sewage outlet (which went directly into the Loop), the flax industry and other businesses. However, by this time, any rhetoric

designed to 'save' the Loop was overtaken by the effects of the Whirokino Cut on the Loop.

The Cut rapidly expanded to take the full flow of the Manawatu River, leaving the Loop with a comparatively minimal amount of inflow. The speed at which this occurred surprised even the experts. Effects on the Loop were practically immediate -

....the old channel at the mouth of the Cut is almost completely silted up and there is now only a trickle of water flowing around through Foxton, and during low river conditions I do not anticipate that there will be any water flowing around the old course at all....

(Moutoa Drainage Board 28/11/45, Letter to PWD)

Foxtonians viewed it as unjust and unfair that the river had been 'stolen'. As one individual stated at the time -

Words cannot express how I feel on the matter...We must stop playing about with the river. Foxton has suffered enough already to give relief to the upper reaches. We are not going to sit back and let these bodies take the river away altogether. This loop provides a source of living for a number of people and has done so for many years.

(Manawatu Herald 24/6/49)

For Foxtonians, the Loop represented a fundamental part of the identity of their township and for some, a source of livelihood. The construction of the Whirokino Cut, although its benefits were widely recognised, stripped this birthright and jeopardised the future of the township.

2.1.1 The Whirokino Cut Commission of Inquiry 1953

The destructive 1953 Manawatu River flood and continued dissatisfaction were the chief reasons for a Commission of Inquiry being called into the Whirokino Cut on February 11 1953. The purpose of the Commission was "to inquire into the effect on Foxton and District of the construction of the Whirokino Cut in the Manawatu River" (CDCB 1989, 5). It also aimed to determine "...methods of compensating Foxton for the loss of the amenities it had suffered because of the successful diversion of the Manawatu River at Whirokino" (Soil Conservation & Rivers Control Council (SCRCC) Report 14/10/63, 1). The three person independent Commission held a public hearing in Foxton in April 1953.

The Commission of Inquiry released its report in March 1954. This acknowledged that Foxton had suffered adversely from the Whirokino Cut and that some form of compensation was warranted. The Foxton Loop had provided 'certain amenities',

particularly for sewerage disposal, water supply and as a commercially viable port. The Report detailed the effects of the Whirokino Cut on the Foxton Loop:

- (a) The Cut deprived Foxton Borough of the enjoyment of a continuous flow of fresh water through the Loop.
- (b) It transformed the Loop from a navigable river to a tidal brackish backwater.
- (c) It caused silting in places hitherto free from 'shallowing'.....
- (f) The Loop, in general, has ceased to be desirable for fishing, swimming or boating.
- (g) The water in the Loop is unsuitable for use in the Flax stripping mill.
- (h) Intermittent odours were given off...[that were]...certainly obnoxious and at times intolerable.....
- (g) The Loop is no longer usable for commercial navigation....

(Whirokino Cut Commission of Inquiry 1953, 7)

These were detrimental to a wide array of activities. While the Cut had caused these undesirable changes, they were not deemed serious enough to reverse the status quo. Nature, it seemed in the Foxton Loop conflict was a victim of circumstance. The report clearly endorsed the Cut as necessary:

The benefits of the works so far outweigh the disadvantages that interference with the Cut is strongly opposed: those whose complaints were loudest, concede that the benefits from the Cut should not be jeopardised. (Whirokino Cut Commission of Inquiry 1953, p. 7)

To address the flax mill issue, the report suggested moving the flax mill to another site and other mitigation measures to address the problem of flax mill effluents. Any associated costs of these and any future problems with Foxton sewerage were to be borne by the State. No other compensation was forthcoming. The recommendations were unacceptable to the main parties opposed to the Cut - the borough council, flax mill and harbour board. These groups, which had suffered the most significantly from the decline of the Foxton Loop, were essentially ignored in the discussions on the Loop's future.

Full responsibility for the Loop was transferred to the MCB in 1963 (SCRCC 17/10/63, Letter to MCB). The MCB advised that any further work on the Loop was unlikely - "...the river will maintain a smaller channel than at present, but will always be open. The Board has no proposals for additional work" (MCB 14/12/65, Letter to FBC). At this point, it appeared the Loop issue had 'run its course'. The Whirokino Cut had left the Loop a deteriorating and stagnant body of water. With the effects of the Cut, tidal conditions and Manawatu River flood events, the MCB eventually expected the Loop to become an oxbow lake. Figure 2 indicates the changes that have occurred to the Loop

during the years following the Cut. Indeed, by the year 2050, the Loop was expected to have become an infilled depression (CDCB 1989).

2.2 The Save the Foxton River Association (SFRA)

The debate was reactivated with the formation of the Save the Foxton River Association (SFRA) by a group of Foxton locals in 1985/86. A public meeting in October 1985:

...brought forward a much larger body of concerned people from many walks of life who believe that, while much of what has happened over [the last] 42 years is irreversible, what remains is still valuable to Foxton and deserves to be fought for.

(SFRA 7/2/86, Letter to FBC)

The Association never became officially incorporated, which as SFRA interview respondent² Damien suggested was a problem - "...it was never legal, and I was never very happy about that....We were just the Save the River Association". The SFRA revived the Loop issue with the aim of achieving some form of restoration to the river loop. It focused on the:

...retention of a free-flowing channel of waterway [and to ensure that]...attempts be made to see that at least a portion of waterway within the Borough be beautified and restored to a state enabling boating and other recreational use for local people as well as providing an added amenity for visitors to the town.

(SFRA 7/2/86, Letter to FBC)

The MCB were informed of the intentions of the SFRA in early 1986. The SFRA did not hold the MCB responsible for the problems with the Loop - "no affront is intended to your Board" (SFRA 19/2/86, Letter to MCB, Original emphasis). Instead, the association resolved that the PWD and Labour government of the 1940s were responsible. It was to the 1980s Labour government that the initial action was addressed.

² All names of interview respondents are pseudonyms.

(extent of surface water exposure as shown by aerial photographs)

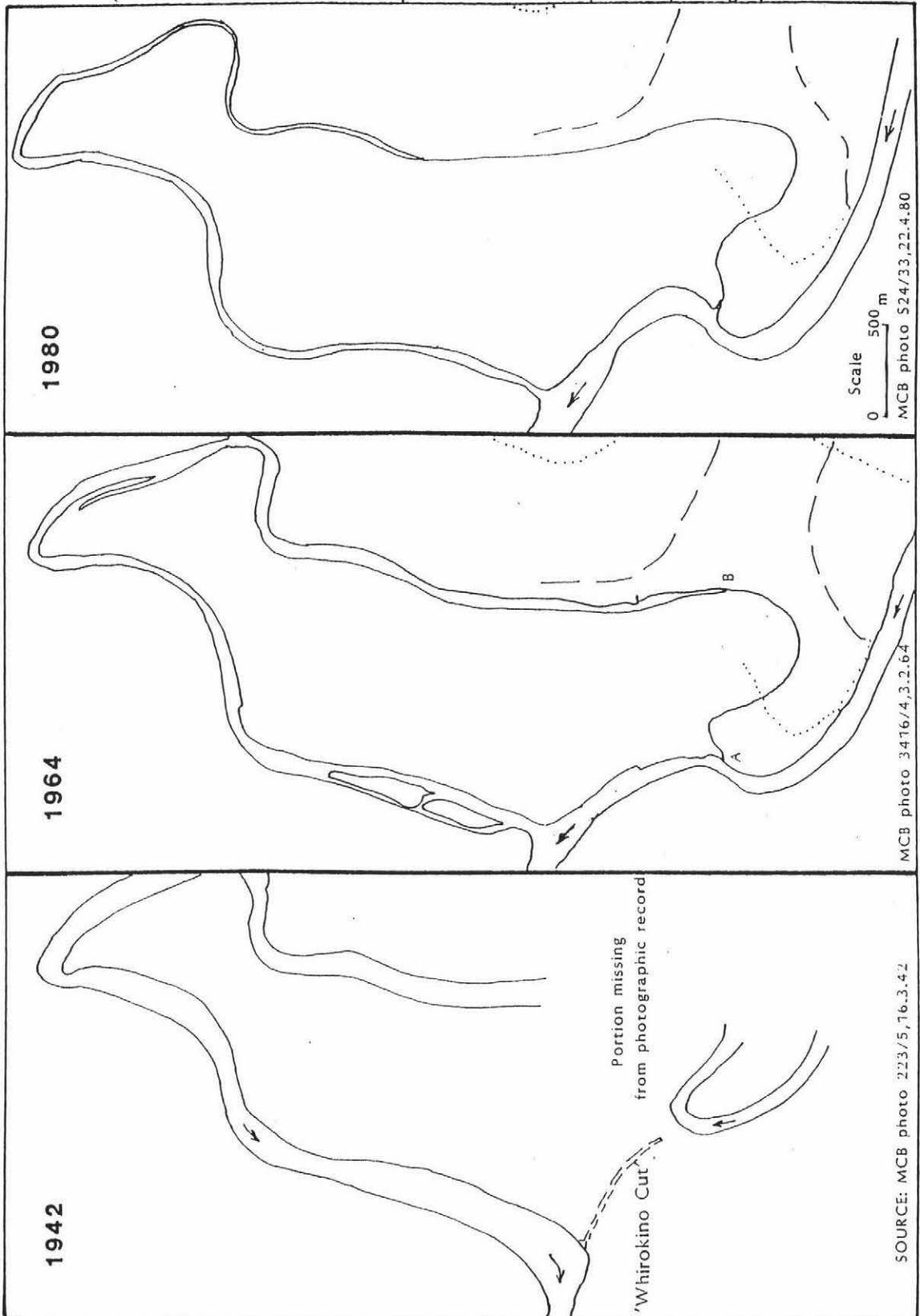


Figure 2: Changes on the Foxton Loop 1942 - 1980

Source: Central Districts Catchment Boards 1989 Foxton Loop Flow Improvement, Central Districts Catchment Boards Report No. 80, p.15)

2.2.1 *The Foxton Loop Petition*

Initially, a public petition was launched by the SFRA with substantial media coverage to encourage action from Parliamentarians (see Figure 4, Chapter 3). The FBC endorsed the petition, stating that they had “..faith in the leaders of the petition, who had done so much background research to adequately represent the interests of the Council and citizens of Foxton” (FBC 23/10/86, Letter to IALGSC³). A gold embellished petition was delivered to the steps of Parliament by horse-drawn tram on May 7 1986. It was read by Foxtonians dressed in period piece. The petition was signed by 1928 people, which represented nearly two thirds of Foxton’s population. It was endorsed by the Labour Member of Parliament in 1986 for Horowhenua, the Right Honourable Annette King. Other submissions were also addressed to Government ministers. A letter sent with the petition promoted it as dealing with an issue of ‘Natural Justice’. It required a resolution to the Loop issue “..to both salve the ‘National Conscience’ [and] be of expected long term benefit to the ‘National Purse’ ” (Fraser 7/5/86, Letter to House of Representatives). The petition requested:

...that this great injustice be redressed....in restoring a significant (if partial) river flow of fresh water to the Foxton River loop and the clearance of siltation necessarily associated ... so that future generations may again enjoy, in part at least, a recreational use of this God-given amenity which has been lost to serve the interests of the State at large, through man’s (*sic*) interference with nature. (SFRA 7/5/86c)

Although the SFRA absolved the MCB for the historical problems with the Loop, at the time the SFRA claimed the Board was actively seeking to undermine the petition. The SFRA attacked the MCB as an ‘unduly prejudiced body’. It requested that the Minister of Works ensure senior engineers from the National Water and Soil Conservation Authority (NWSCA) investigated the Loop ‘without prejudice’ (SFRA 7/5/86b). It appeared that the battle lines were being drawn.

2.2.2 *Context of the Petition*

The petition was introduced during a time of substantial central and local government restructuring. The Labour government had introduced a new and comprehensive regime of reforms upon taking office in 1984 (Sharp 1994). They encouraged free market

³ IALGSC - Internal Affairs and Local Government Select Committee.

policies which involved major restructuring for numerous industries. Local government was also subjected to a major shakeup, with the centralisation of more than seven hundred local authorities. Most ad hoc authorities were absorbed during this transitional period into district, city and regional councils. Fourteen regional authorities were created based on water catchments (Cocklin and Furuseth 1994).

The relationship of the petitioners to the State was one of 'respectful tolerance'. The word 'petition' signifies the need to present a case before a 'higher' power. Theories focus on the State "as a set of institutions for the protection and maintenance of collective society" (Dear 1994, 592). Of Cloke and Little's (1990) four approaches to the state, the petition was couched in a pluralist political environment, where power was available through democratic procedures to all interest groups and classes. The petitioners were empowered through democratic ideals to present what they believed was a legitimate interpretation which warranted further consideration by the government. They used these democratic procedures to situate themselves in a position of power over groups opposed to their plans. However, this was contingent on a favourable response from government, which retained the ultimate power to ignore or support the petitioners' requests. As it turned out, a compromise was offered with support for the restoration of some flow, but without the impetus to ensure this occurred.

2.2.3 The Select Committee Hearings

The petition was referred to the Internal Affairs and Local Government Select Committee (IALGSC) for further investigation. This Committee met on two occasions to consider the Petition and received submissions from the SFRA, the MCB, the Commission for the Environment, the Ministry of Transport, the Department of Lands and Survey, Ministry of Agriculture and Fisheries (MAF), Ministry of Works and Development (MWD), and the Department of Internal Affairs.

The initial Hearing was held for the first time in the Foxton Council Chambers on the October 8 1986. Chaired by Member of Parliament Trevor Young, the hearing received submissions from the SFRA and the MCB. The SFRA presented a comprehensive five page submission before the Committee. This submission summarised aspects of the history of the township of Foxton, Whirokino Cut and Foxton loop, and the impacts of

the Cut on Foxton township. It also outlined the requests of the petitioners to fix what the SFRA saw as a 'pressing problem'. The petitioners believed that Foxton had:

...never ever benefited one whit from the Whirokino River Cut, or for that matter, the much more recent 'Lower Manawatu Flood Control Scheme'..[and that]..the areas downstream (Foxton and Foxton Beach) have been made the scapegoats for a system of flood-control designed to benefit the rich OR the interests of the State.

(SFRA 18/6/86, Letter to IALGSC, 3, Original Emphasis)

The MCB reply to the SFRA submission outlined the difficulties of meeting the petitioners' requests and the work needed to accomplish it:

...To open up the top end of the loop.....would be a mammoth exercise involving a sizeable reinforced concrete weir at the top end of the Whirokino Cut.....There would be a very large volume of earthworks to be carried out to excavate a channel of sufficient dimensions to allow sufficient flow to travel through the loop.....there would be a consequential lengthening of the Manawatu River and a subsequent raising of flood levels upstream of the Whirokino Cut. This would involve raising stopbanks over a considerable distance upstream.

(MCB 4/7/86, Letter to IALGSC)

The MCB outlined two options for restoration of the Loop. Firstly, there was the possibility of diverting a portion of the Manawatu River into the Foxton Loop. This would ensure a greater flow of water along the length of the Loop and that the Loop could at least be partially flushed. The second option would see a drain at the top end of the Loop enlarged with bridge access. This was deemed the most viable option - "...I [Representative of the MCB] could not support the first alternative because of the costly remedial work that would result and also the adverse effect on the land drainage in the area" (MCB 9/10/86, Letter to IALGSC).

A number of government departments also sent written submissions to the first hearing⁴. Of these, only the submission from the Department of Lands and Survey supported the petition on the basis that it would improve property values in the region. Other submissions chose to either oppose the petition or gave no opinion. The main reasons for opposition were the impracticality and cost of remedial works and the suggestion that the Whirokino Cut had only accelerated the inevitable. The Loop had become uneconomic as a port and the flax industry had been only marginally economic. The submission of the MWD concluded that:

⁴ Submissions Letters to the Internal Affairs and Local Government Select Committee: Commission for the Environment, 12/8/86, Ministry of Transport, 16/9/86, Department of Lands and Survey, 19/9/86, Ministry of Agriculture and Fisheries, 19/9/86, Ministry of Works and Development, 1/10/86, Department of Internal Affairs, 6/10/86.

....it is not desirable to turn back the clock and attempt to restore the full river flow through the loop, which is the only way of completely fulfilling the petitioners' desires. It would be a difficult step and most likely compromise the functions of the Lower Manawatu River Control Scheme....It may not be feasible to maintain the Loop as a viable watercourse.

(MWD 1/10/86, Letter to IALGSC)

The Select Committee reconvened on Wednesday October 29 1986 at Parliament buildings. This second hearing was deemed necessary for parties to consider the departmental submissions and additional information from the MCB. The SFRA presented a six page supplementary submission which critiqued the Departmental reports. This regarded the report from the Department of Internal Affairs and Ministry of Transport as irrelevant, and the Commission for the Environment's report as 'interesting'. The SFRA agreed with the observations of MAF, the Department of Lands and Survey and historical research carried out by the MWD. However, it perceived that the change in purpose from 'overflow' to 'river diversion' had bypassed the FBC, and had resulted solely from a decision made by the MORB and PWD in Palmerston North. The Association questioned whether any difference would have resulted had the FBC been consulted - "it is likely that it would have been influenced to agree, with the assurance that river-flow past Foxton would not be materially affected" (SFRA 29/10/86, Letter to IALGSC, 2). Representatives of the MWD, MAF and Department of Internal Affairs also addressed the second hearing.

The Select Committee reported to Parliament on November 18 1986, recommending the petition was referred to government with the following rider:

...that the Ministry of Works, Manawatu Catchment Board, Ministry of Agriculture and Fisheries and the National Water and Soil Conservation Authority give consideration to the widening of the drain leading from the Whirokino Cut into the Foxton Loop and any dredging that would facilitate the flow.

(IALGSC 18/11/86, Report to House of Representatives)

A rider added to a Select Committee report indicates that the Committee, while unable to accede to the request, feels some sympathy toward it (McGee 1994). Despite this, a rider is not binding on the organisations to whom it is referred. The petition document succeeded to the extent that the arguments of the SFRA received some sympathy and improvements were suggested. It attracted attention to the Loop, and encouraged various groups to rethink their approach to the Loop. While this was a positive development, it did not provide any concrete solutions to the Loop problem.

2.3 Further Developments

Primary responsibility for a resolution to the Loop conflict was conferred on the MCB. A meeting was convened by the Right Honourable Annette King on March 9 1987 in Foxton to clearly establish the positions of the different groups involved. Representatives from all key parties were present at the meeting. The meeting focused on the two options presented by the MCB to the first select committee hearing. The first option was passed over as 'too costly'. The minutes of the meeting recorded that all of the groups accepted that this was the case, including the SFRA.

The SFRA considered the government responsible for funding any changes on the Loop. However, the meeting established that government funding would only be available to a maximum of sixty percent of any study that was undertaken. Any remaining costs would need to be met by local contribution. The meeting concluded that "a case for at least partial reparation of the damage done to the former river (now the Foxton River Loop) clearly existed and the only problem was that of funding" (FBC 9/3/87 Record of Discussion of Meeting, 4). It recommended that the FBC formally approach the MCB in seeking to achieve the second option they had suggested - enlargement of a drain at the top end of the Loop with bridge access. The role of the government, apart from producing funds to help with any study or restoration work had effectively ended. The issue was now passed onto the MCB in an attempt to secure an acceptable local solution.

2.3.1 *The Foxton Loop Studies*

The MCB initially proposed a \$29 000 one year study. This study sought a comprehensive investigation of the proposal to open the Loop at the top end of the Whirokino Cut. A study of this magnitude (and cost) was seen as unnecessary by the FBC (FBC 27/7/89, Letter to MCB). The FBC perceived that a study would only take a month costing a total of \$500, which they expected the MCB to pay. At this point, the FBC accepted "that a major flow diversion into the river loop by means of a weir would not be an economic option in the foreseeable future" (FBC 22/9/87, Letter to MCB). They proposed a three month study. The MCB reply noted the FBC's 'change of heart', and proposed an eight month study "to investigate the costs and probable consequences

of widening a drain at the upstream end of the Foxton Loop” (CDCB 1989, 23). This report was expected to cost \$9482 and be completed by June 30 1988. A \$5000 subsidy was approved from NWSCA for the study.

The SFRA’s dissatisfaction over potential solutions to the issue was evidenced through newspaper comment. One article stated their position - “Mr. Halidone, who is president of the Foxton Save the River Association, said it was ‘high time’ the various authorities involved in the wrangle went public on where the issue now stood” (Manawatu Evening Standard 9/11/88). At this point, it is significant that a settlement to the conflict had been removed from SFRA control. Any solution was likely to result from discussions between the MCB and FBC. At that stage, in late 1988, a clear consensus between the groups over a solution to the Loop problem was non-existent. As the General Manager of the MCB commented, “....I would take a lot of convincing that we should do anything (with the loop) at all” (Manawatu Evening Standard 9/11/88).

The Foxton Loop Flow Improvement study was published in January 1989 and argued that introduction of Manawatu River water into the Loop would disadvantage Foxton due to the inferior water quality of the Manawatu River. It maintained that “..engineering studies indicate a restriction to the river flow (through the Whirokino Cut) would be necessary before significant flow re-occurred through the Loop. Any such restriction would create major flood control problems” (CDCB 1989, 21). The Report highlighted the importance of the Lower Manawatu Flood Control Scheme. This represented the most significant flood control mechanism on the Manawatu River. The bulk of the scheme had been completed in 1965. It aimed:

- (a) To prevent flooding of as much land as possible.
- (b) To stabilise the river in a permanent channel.
- (c) To reduce maintenance to a minimum. (Evans 1964, 412)

Spatially, it resulted in the stopbanking of the Manawatu River from the Manawatu Gorge to the Tasman Sea and the construction of a six mile floodway across the Moutoa basin. The Moutoa Sluice Gates were installed at the beginning of this floodway. The Scheme was designed to cater for a flood of 3450 cumecs or a hundred year flood and protected approximately 300 square kilometres of floodable land. It significantly diminished the threat posed by the Manawatu River, with one commentator suggesting

that “the success of the scheme has actually allowed people to forget the danger that once existed”(Poole 1983, 35). However, the threat posed by the scheme’s failure was also considerable -

In New Zealand, only the Hutt River and Waimakariri River threaten larger concentrations of people and property. A precise figure is not available for the value of property which would be at risk should flood protection works fail during an extreme flood. (MWRC 1992, 1)

Other groups also agreed with the recommendations proposed by the report. The Ministry for the Environment (MFE) suggested that it demonstrated:

..conclusively that closing of the Whirokino Cut and restoring the flow of the Manawatu River to the Loop would greatly increase the risk of flooding. Indeed the effectiveness of the entire Lower Manawatu Scheme operation would be compromised. (MFE 27/4/89 Letter to CDCB)

With this in mind, the Foxton Loop Flow Improvement Report identified four possibilities for improving the flow of water through the Loop. These included closing or partial closing of the Whirokino Cut, widening the top end of the loop, installation of tidal gates at the access site to Matararapa Island and replacing the existing culvert and partial widening of the drain. The report’s conclusions are in Appendix Two.

The initial response from the FBC to the report was negative. The Council labelled the report as largely irrelevant, with only three out of forty pages dealing with what it saw was the key issue - the cost and consequences of widening the drain at the upstream end of the loop. The CDCB (which replaced the MCB in 1987) was accused of withholding vital information, and the FBC suggested that the Board undertake “a re-evaluation of attitudes and a more positive approach to this issue” (FBC 24/4/89, Letter to CDCB). The CDCB defended the report, and sought to dispel the accusations leveled at it by the FBC (CDCB 3/7/89, Letter to FBC). This reaction appeared to initiate an attitude change from the FBC. A proposal for further development of the Loop was forwarded to a team which had begun studying Regional Recreational Water Resource Options in the Manawatu. They suggested the development would provide “major benefits to the Region which would accrue from a relatively minor desiltation programme and would provide an excellent cost/benefit ratio” (FBC 27/7/89, Letter to CDCB).

The MWRC, which replaced the CDCB in 1989, appeared decisive on the Foxton Loop. They stated that,

...re-opening Foxton Loop would be a waste of money and would ultimately fail to achieve any purpose.....Dredging would be uneconomic, and his view was that reopening the inland end to re-instate a partial flow was not hydrologically possible.

(Manawatu Evening Standard 22/11/89)

Debate continued over the Loop, particularly over problems experienced with Foxton Borough's sewage in the early 1990s and the physical condition of the Manawatu River. The Pollution-Free Manawatu River Group was formed as a result of anger over the condition of the Foxton Loop and Lower Manawatu River (Manawatu Evening Standard 22/7/92). In 1991, the SFRA finally decided to "go it alone in efforts to restore partial Manawatu River flow through the stagnating Foxton loop" (Manawatu Evening Standard 8/7/91). At this point, the SFRA recognised that the restoration of full river flow through the eight kilometre channel was impossible, but that "a compromise, in which tidal gates would trap tidal peaks and force limited flows through the waterway, [had] become the association's objective" (Manawatu Evening Standard 8/7/91). The petition had finally failed, as a result of a report from the MWRC stating that excavation was impractical and would not achieve the desired effects. However, the SFRA believed that the risk was that "in another 10 years, unless we do something, there won't be any water in the loop at all" (Manawatu Evening Standard 8/7/91).

The SFRA efforts to 'go it alone' materialised in the formation of the Foxton River Loop Development Working Party. This group met initially in July 1993 and hoped to develop historical sites and improve the habitats of natural wildlife along the Loop, as well as work towards improvements in the river flow. However, the SFRA finally appeared to concede defeat, as a result of a lack of support from the MWRC. As SFRA interview respondent Damien explained:

....we got these guys down for a meeting from the Manawatu Regional [Council] and they said to us, you guys do what you like....Go ahead and do what you like. So we sort of cleaned the drain out the top end and we put the bridge in and then all of a sudden it just got crunched and said stop. And that was that. And that's when we all sort of pulled out.

2.4 Discussion and Conclusions

The Loop was a local issue, which local people sought to resolve. The discussions on the Loop provide my material for analysis. I have used this overview to outline the historical

foundations and development of the Loop conflict, along with how it was approached by each of the key groups. As social constructionist theory suggests, understanding of the Loop and each attempt to achieve change was culturally and historically specific. However, it was sourced from the one event which placed the future of the Loop in question, namely the construction of the Whirokino Cut. This event was the catalyst for conflict.

This conflict did not involve violence or passive resistance. It involved primarily two groups drawing upon particular constructions of nature to legitimate their positions. The Loop's definition and treatment relied on different criteria and expectations. This meant that only one construction was likely to succeed, namely the construction invested with the most power. It was a 'war of words', based in powerful discourses and representations which finally decided the Loop issue. It is important to note, at this point, that this conflict *is* historical. It did not evolve out of a group's dissatisfaction with the landscape at their back door. The Loop was not suddenly polluted in a disastrous event. It drew from a historical authority which identified the Loop as important. For Foxton people, and the SFRA in particular, the Loop represented more than just a body of water flowing at the back of Foxton. It was a fundamental part of their identity, and its loss was comparable with the loss of a body part (see Chapter 3).

The SFRA were a group of independent people bound together by a common objective - the restoration of the Loop in some shape or form. The group had no 'official' status - it was not an 'official' association. The SFRA action was ostensibly to improve the Loop for the greater good of Foxton, although underneath rested the familiar theme of capital gain. It was hoped that restoration of the Loop could improve the attractiveness of Foxton as an investment opportunity, and even more importantly as a tourist destination. The 'localness' of the Loop conflict proved to be a major handicap. It had no national appeal, nor was it likely to drum up significant national support. As SFRA interview respondent, Bernie, suggested:

I can't see it being a high priority either for any regional authority unfortunately. They're so strapped for cash to do other things, that it's...gonna be one of those things you do if you had a few extra dollars in your pocket. It may take a nationwide campaign to do that, like Save Manapouri....Save the Foxton River (laughter)....

As the laughter at the end of this conversation suggested, a national campaign to 'Save the Foxton Loop' was a highly dubious proposition. However, as a group of concerned New Zealand citizens, the SFRA attempted to have their 'voice' heard through the avenues available to them. They defended the Loop on the basis that it had been 'stolen' from the township of Foxton, and recompense had not been forthcoming. While the SFRA eventually accepted that the achievement of full restoration of the loop was not possible at that time, that remained their desire. Their 'voice' was initially heard, although was overtaken by groups whose rhetorics were invested with greater power by virtue of the functions they fulfilled.

The MCB was the main such group. As the official manager of the Loop, it was listened to and recognised as legitimate. Empowered by scientific discourse, it used this power to signify the best possible options for the Loop, based on what was 'reasonably' achievable. Not only did the MCB have the power of scientific discourse to legitimise their arguments, but they were also bound to their mandate. This was to manage the waters of the Manawatu to facilitate the protection of lives and property. In its official capacity, the MCB was always going to retain the power to choose the future of the Loop. They argued that the Loop had become an essential part of the Lower Manawatu River Scheme and could never be returned to its previous condition, although minor changes were possible. The petition did receive favourable consideration through the channels of Parliament. This 'rider', although an indication of the wishes of the highest authority of the land, held no power to enforce any changes. The Loop issue was passed to a regional authority who held the 'real' power to decide the Loop issue.

Chapter 3: 'Methodology'

3.0 Discursive Analysis

This study undertakes a discursive analysis of documentary and oral material associated with the Foxton Loop conflict. As previously outlined (see Section 1.1.2), discourses represent 'signification systems' people use to help 'structure' their understanding of 'reality'.

Discourse analysis is not limited to written texts. Indeed, "anything that can be 'read' for meaning can be thought of as being a manifestation of one or more discourses and can be referred to as a 'text'" (Burr 1995, 51). The output of discourse analysis always constitutes partial, situated, contextual and embodied knowledges.

3.1.1 'Method' in Discourse Analysis

'Method' in discourse analysis is problematic for a number of reasons. A single 'method' of discourse analysis does not exist. Indeed, "the notion of 'method' is itself the product of a positivist discursive frame which constructs an acceptable set of procedures that leads to the 'discovery' of truth" (Berg and Kearns 1996, 4). Discourse analysis is based on the assumption that multiple truths will be uncovered. It does not seek to model a positivist framework involving a distinct series of 'techniques' of which the final goal is to produce a body of codified 'results'. Instead, discourse analysis constitutes "a craft skill, something like bicycle riding or chicken sexing that is not easy to render or describe in an explicit or codified manner"(Wetherall and Potter 1992, 101). Because discourses are abstract, they are difficult to define in a way that is 'watertight'. Indeed, discourse analysis can only provide a 'flavour' for how something will be interpreted. Despite this, the 'truths' uncovered will create sufficient understanding to enable a term to become meaningful. Hence, discourse analysis represents a subjective and interpretative reading, according to the skill and rationale of the individual researcher. It is active research, with the researcher involved in the "process of developing, testing out and justifying interpretations and readings of texts"(Wetherall and Potter 1992, 105). At this point, I need to acknowledge that my reading of nature in the Foxton Loop conflict is not necessarily the 'truth'. However, this does not preclude it from providing an interpretation which makes the concept of nature workable and allows its meaningful usage in everyday life.

Particular 'techniques' can be used to help identify aspects of discourse. A number of authors have attempted to outline a 'method' of doing discourse analysis. I will outline a few examples which I have drawn upon here. Burr (1995, 166) suggests a form of discourse analysis concerned with:

tracing the development of present ways of understanding, of current discourses and representations of people and society, to show how current 'truths' have come to be constituted, how they are maintained and what power relations are carried by them.

Her 'technique' relies on the identification of 'ways of talking' about something. It involves careful reading and re-reading of 'texts' in a search for recurrent themes, coherent statements and language which appears loaded with meaning. Within this analysis, it is also important to recognise ways the event or process is not discussed, which may assist in determining how power relations are expressed. Following the identification of these themes, analysis involves thinking about their implications and how they are worked out in the 'real world'.

Fairclough (1992) divides the analysis of discourse into three main tasks. He calls these the macro aspects of analysis, with emphasis on the intertextuality and interdiscursivity of discourse samples, the micro aspects of analysis, focusing on detailed analysis of the 'texts' and the analysis of the social practice of which the discourse is a part. Fairclough (1992, 231) suggests that this analysis:

...involves a progression from interpretation to description and back to interpretation: from interpretation of the discourse practice to description of the text to interpretation of both of these in the light of the social practice in which the discourse is embedded.

Within Fairclough's 3-D concept of discourse analysis (see Figure 3) he outlines a number of 'techniques' to use in the analysis of discourse and texts. He suggests that analysts may only wish to focus on relevant aspects for their particular projects.

Potter and Wetherall (1987, 1994) and Wetherall and Potter (1992) also provide suggestions on the analysis of discourse. They suggest ten stages in the analysis of discourse, whereby

...participant's discourse or social texts are approached in *their own right* and not as a secondary route to things 'beyond' the text like attitudes, events, or cognitive processes. Discourse is treated as a potent, action-orientated medium, not a transparent information channel.
(Potter and Wetherall 1987, 160 Original Emphasis)

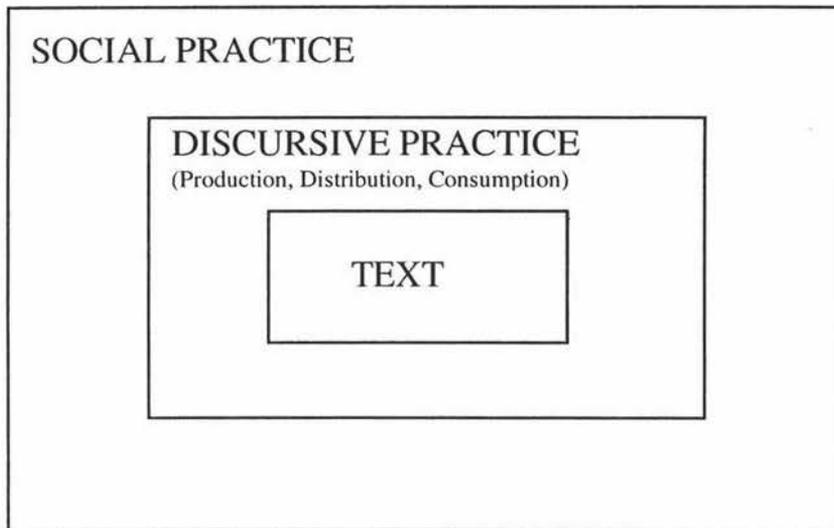


Figure 3: Fairclough's 3-D Conception of Discourse

(Source: Fairclough, N. 1992 *Discourse and Social Change*, Cambridge: Polity Press, p.73)

Again, these authors suggest that there is no particular 'method' in the analysis of discourse. Their analysis involves firstly the detailed search for patterns in the data, with particular emphasis on areas of obscurity. Secondly, the functions and effects of the discourses used are identified. This stage seeks to determine the most fruitful avenues of analysis through forming hypotheses about the functions which the discourses seek to fulfil, and attempting to validate them. Potter and Wetherall (1987) suggest a four-pronged process of validation. Firstly, analysis should give coherence to a body of discourse. The pattern identified needs to account for any loose ends. Secondly, the analysis should focus on what the *participants* see as important, rather than previously determined 'formulas' for understanding discourse. Thirdly, how linguistic resources are used in discourse analysis should not only solve problems, but create new problems. Finally, and most importantly, is the idea of fruitfulness. Analysis should produce novel solutions to research problems.

3.2 My 'Method'

My study drew from the above 'methods' in analysing 'texts' from the SFRA and MCB. Specifically, I concentrated on the Foxton Loop Petition and the SFRA and MCB submissions to the Select Committee. I also used other relevant correspondence and associated ephemeral material. I conducted, transcribed and analysed semi-structured

interviews with key individuals involved with the Loop issue. I will discuss these further in Section 3.3.

I concentrated on these 'texts' for a number of reasons. Firstly, the importance of the petition was obvious. It was the frontispiece of the SFRA. This document contained the request of the petitioners and the reasons for this request. Secondly, the submission documents, two from the SFRA and one from the MCB, were significant because they detailed the opinions of these organisations in relation to the Foxton Loop conflict. The first submission of the SFRA presented a comprehensive account of the effects of the Whirokino Cut on the Foxton Loop, how the Cut had affected Foxton township, the historical background to these issues and what the petitioners' believed represented the solutions. The second submission discussed and analysed the reports of a number of government departments and other organisations who had provided their opinions on the SFRA petition. The MCB submission represented the first 'official' document to discuss their response. Each of the above four 'texts' were an essential part of this study, because they discussed how these groups talked about the Loop, and inherently their constructions of nature. The documents registered the official stances of the SFRA and MCB. Other documents, such as the Foxton Loop Flow Improvement Report and correspondence between the groups involved were also discussed, although not analysed in as much detail. Finally, the interviews were analysed. While these provided useful information, it is important to acknowledge that they do not represent an original source. Rather, they rely upon a historical recollection of the events.

The documents were read and re-read in order to identify recurrent themes and discourses related to the category of nature. To illustrate how this analysis was conducted, I discuss here both the 'techniques' I particularly utilised and relate them to a specific example, the Foxton Loop petition (see Figure 4, Lines are numbered for ease of reference). Firstly, analysis revolved around the identification of documents within a particular genre. A genre refers to the main purpose of a document. For example, the Foxton Loop petition was classified into the genre of a petition. While this may seem obvious, it distinguishes the context - the social practice of petitioning. The process of petitioning in New Zealand originated from the early English Parliament. I have outlined

the process of both petitioning and select committee hearings as related to the Foxton Loop conflict in Appendix Three and Four. Today, petitions are primarily used in the resolution of private interests, whereas “the citizen is able to express his or her opinion on a subject of some concern and address it in a public fashion to the country’s legislators” (McGee 1994, 383). In simpler terms, as SFRA interview respondent Bernie suggests, a petition is “one of the ways that you can get people to consider what you are doing”. The petition of the SFRA was designed to address the local grievance of a group of Foxton residents. It was the first undertaking by the SFRA to formalise its argument to Parliament.

My analysis relied on a combination of ‘techniques’. I focused on four main areas which were identified as relevant to the research - structure, analysis of the text, intertextuality, and social practice. I discuss each of these in turn. Firstly, structure refers to how a text is organised. It isolates key components of the text, and identifies how these components are used to emphasise particular discourses. This also inherently includes the processes a ‘text’ may be subjected to ‘behind the scenes’, the likely development and transformations of the ‘text’, and the social practices of how a ‘text’ is produced and consumed. The petition was a written document produced to be spoken. This was indeed the case as it was read on the steps of Parliament by the Foxton mayor. As a Parliamentary petition, it was expected to be consumed collectively by a particular audience (i.e. Parliamentarians) and to undergo minimal changes. The physical structure of the petition appeared threefold. Firstly (Lines 9-14), a justification was given for the SFRA interest in the Loop issue. They wanted a perceived injustice redressed. Statements such as ‘Foxton was the first settlement and birthplace of the Manawatu’ (Lines 9-10) and “the river was our Raison D’être as a town” (Line 14) legitimated the authority of the SFRA as an interested party. Secondly, the petition explained how the arguments it presented amounted to an injustice (Lines 16-31). The river had been removed from Foxton in order to improve flood control in the greater Manawatu. Blame for this was laid at the feet of “the, then, Public Works Department” (Line 17). Finally, the petitioners made their request, in the acceptable form of a petitionary ‘prayer’ (Line 33- 46). In accordance with Parliamentary procedure, only this prayer was presented to the House.

The second major area was textual analysis. Fairclough (1992) identifies four major headings in this area - vocabulary, grammar, cohesion and text structure. My analysis used a number of the devices discussed by Fairclough, such as presupposition, metaphor, modality, cohesion, themes and word meaning. I aimed to identify key aspects of grammar to help determine their effects upon thinking and practice. Presupposition refers to the elements of a 'text' which are regarded as 'given'. They are identified by the word 'that' or by definite articles with categorical meaning such as 'the chair' or 'the Winebox Inquiry'. These textual elements identify what people understand as indisputable fact. In the petition, this included "the first settlement" (Line 9), 'birthplace of the Manawatu' (Line 9-10), and "'founding' community" (Line 23). To the SFRA, these presuppositions were vital to their argument. Belief in the distinguished history of Foxton township was essential to justifying a restored Loop. Rhetoric was also highly emotive in places. Examples were "mighty Manawatu River" (Line 11), "depriving this 'founding' community" (Line 23), "rampant weed growth" (Line 29), great injustice" (Line 34), and "man's (*sic*) interference" (Line 40). This was indicative of the strong feelings of the petitioners and the perception that a significant 'wrong' had occurred. Emotive language was used to express disappointment at the present situation, which was particularly linked to the effects of the Whirokino Cut's construction. The river itself was described as 'mighty' (Line 11), indicating both the 'power' of nature and an inherent respect for this power.

Metaphors are used to signify something in ways familiar to most people. They are often value-laden constructions which sustain particular interpretations of 'reality' (Wilson 1996). The SFRA used metaphor to legitimate the town of Foxton as an established historical settlement in the Manawatu, through such ideas as "birthplace of the Manawatu" (Line 9-10). Modality refers to the degree of affinity expressed in an argument, indicated through words like 'must', 'may' and 'probably'. This degree of affinity suggests the emphasis which is being attached to a particular viewpoint. It can also help indicate the tone of a document. The petition had a strong 'flavour', while exhibiting a mix of respect and criticism and a positive politeness (Fairclough 1992). This strong modality was also endorsed through its extensive use of presupposition and

emotive language (see above). Deferential recognition of the authority and power of Parliament was depicted particularly through the phrases ‘respectfully submits’ and ‘respectfully prays’ (Line 8, 34). While these phrases were used ostensibly to satisfy the procedural requirements of petitioning, it was unclear how the petitioners *did* actually perceive the government. This was hinted at in other ways. The use of emotive language contributed to the petition’s strong tone, but also gave it a faint arrogance.

In addition to the above grammatical ‘techniques’, my analysis used the idea of themes as a major tool for determining the ‘ways of talking’ about nature in the Foxton Loop conflict. This was largely an intuitive and interpretative process. Each of the aforementioned texts were carefully read and re-read to identify the key themes of the SFRA and MCB as regards to nature. Themes were collated on the basis of similar ideas, key words and phrases and the general thrust of each argument. I utilised the qualitative analysis programme, Non-numerical Unstructured Data Indexing, Searching and Theorising (NUD.IST) to assist in the categorisation of the ‘texts’ into relevant themes. This computer program allows for the classification of rhetoric from ‘texts’ into nodes and tools assist the analysis of these nodes. The identification of themes allowed for ‘like’ rhetoric to be classified and assisted in the identification of discourses of nature. These are discussed in detail in Chapters Four and Five.

Texts are full of fragments of other texts. Intertextuality refers to the texts a document draws upon. These ‘exterior texts’ indicate the transfer of meaning from one rhetoric to another. As Kristeva states intertextuality “implies the insertion of history (society) into a text and a text into history” (Kristeva, cited in Fairclough 1992, 102). The intertextual relations of texts assist in determining what other discourses are being drawn upon. Intertextually, the petition drew from a letter sent to a former mayor of Foxton, Mr. Leo King from the Minister of Works, Fraser Coleman. A sentence in the letter was invested with significant meaning - “..A HIGH LEVEL BY-PASS FOR FLOODWATERS....TO PROTECT THE MAIN (NORTH/SOUTH) HIGHWAY (Original emphasis)” (Line 17-19). This sentence was used in the letter to Mr. King to answer a question as to the original purpose of the Whirokino Cut. In the petition (and initial submission) it was used as ‘hard’ evidence that the construction of the Whirokino Cut was incorrectly undertaken and had subsequently severely impacted on Foxton. The petition placed blame firmly

PETITION

TO THE MEMBERS
OF THE HOUSE OF REPRESENTATIVES OF
NEW ZEALAND IN PARLIAMENT ASSEMBLED: -

*The petition of the Save-the-Foxton-River-Association
and 1928 others,
RESPECTFULLY SUBMITS AS FOLLOWS:-*

THAT FOXTON was the first settlement and "BIRTH PLACE
OF THE MANAWATU" by virtue of its establishment on the
banks of the mighty Manawatu River, with a 'Port' and associated
transport system.

THE RIVER WAS OUR "RAISON D'ÊTRE" AS A TOWN!

AND THAT IN 1941/42 a channel known as the 'Whirokino
Cut' was devised by the, then, Public Works Department 'AS A
HIGH LEVEL BY-PASS FOR FLOODWATER' . . . "TO
PROTECT THE MAIN (NORTH/SOUTH) HIGHWAY,"
WHICH WORKS EXCEEDED THEIR DESIGNED
FUNCTION by effectively diverting the historic and natural flow of
the River from its ancient and traditional course past the Township of
Foxton, THEREBY depriving this 'founding' community of its
natural heritage.

A clean, fresh-flowing river at its doorstep!

WORSE - it has left an inheritance of progressive siltation,
rampant weed growth and pollution which denies the community its
Port, Fishing, Boating, and other recreational pursuits, as were its
historic rights and custom!

NOW, THEREFORE, YOUR PETITIONERS

RESPECTFULLY PRAY that this great injustice be redressed, by
steps-seen to be practical, in restoring a significant, (if partial) river
flow of fresh water to the Foxton River Loop and the clearance of
siltation necessarily associated therewith, so that future generations
may again enjoy, in part at least, a recreational use of this God-given
amenity which has been lost to serve the interests of the State at
large, through mans interference with nature.

AND YOUR PETITIONERS IN DUTY BOUND, WILL
EVER PRAY.

FOR AND ON BEHALF OF the "Save the Foxton River
Association" and others.

.....(Robert Fraser)

.....(Dahlson Halidone)

PRESENTED this SEVENTH day of MAY in the year of our
Lord, NINETEEN HUNDRED AND EIGHTY SIX.

Address for Service:

c/ - R.A. Fraser, F.C.C.S.
Incorporated Secretary
PO Box 19

Figure 4: The SFRA Petition 1986 (Original Emphases)

(Source: Manawatu -Wanganui Regional Council Archives, Correspondence File 1/5: Lower Manawatu Scheme 0-15 Mouth to Koputaroa Stream 1976-89)

with a previous administration, while asserting the 'right' to address the petition to the current government, and used quotations such as the above to justify their actions. The use of these techniques was therefore useful in drawing out ideas on the construction of nature within the social context of a petitionary document.

3.3 Semi-structured Interviewing

My study also used a number of semi-structured interviews conducted with people who had been involved with the Loop conflict. Interviewing is typically divided into structured (or formal/standardised), semi-structured and focused (or non structured/non-standardised) techniques (May 1993). Semi-structured and focused interviewing is now widely used in qualitative research. Interviews assist in uncovering the way that people understand and interact with the social world. The social world or 'social reality' has specific meaning for each individual operating within it (Schutz, cited in Minichiello 1995). Interviewing recognises and explores the notion that "there is no single 'real' world that exists independently of the relationships between observers and observed" (Smith 1994, 491).

The 'subject matter' of the social sciences frequently 'answers back', unlike that of the natural sciences. Therefore, interviews place high value on the informant's opinion. Body language may also generate relevant information about the feelings and attitudes of the respondent (Keats 1993). Despite both these facets, interviews should not be upheld as providing an especially accurate picture of 'reality'. The passage of time may affect the validity of answers. The context of the interview, both physical and social, may also affect the quality of answers. As Herod (1993, 306) suggests, "as a social practice, the research process is clearly moulded by the social context within which it is conducted and the social values which underlies its assumptions". Interviews constitute a 'social process', whereby interaction during an interview may be as important to the research as the interview itself (Sayer, in Healey and Rawlinson 1993). Participants bring their own 'intellectual baggage' into an interview, which has effects on the type of answers obtained. In addition, an interviewer's subjective involvement may also dictate what answers are forthcoming. As an interviewer, I am not separated from the inquiry. I am intimately involved. As Eyles (1988, 345) mentions, "interpretative geography does not stand outside its subject matter: it is part of the investigation and of the discourse itself". As an interviewer, I need a thorough understanding

of the research topic and an awareness of possible research questions which may arise during the course of the interview.

Commonly of an interactive style, semi-structured interviewing uses open ended questions to draw information from respondents. While some sense of structure is important, interviews are framed in the hope of attaining complex answers. Open ended interviews may frequently require reformulation of questions during the actual interview, depending on the direction the interview is taking and whether or not the interviewer's rationale is being met. Semi-structured interviewing has a number of advantages. Firstly, the interviewer has control over the questions asked and the direction of the interview, while the interviewee is also left with a sense of being able to make a contribution. Smith (1994) suggests that semi-structured interviewing enables a 'democratisation of the research process'. Secondly, the interviewer is also able to probe any answers to ascertain further relevant information and can rectify any confusion in the answers received or questions asked during (and sometimes after) the interview (Healey and Rawlinson 1993). A semi-structured interview should be guided as practically as possible, and hopefully away from irrelevant tangents (although, ironically these may provide some useful information).

This does not mean the interviewee is simply dictated to. Rather, it gives the interviewee opportunity to develop and dictate the movement of the interview, while remaining within the interviewer's rationale. It creates an atmosphere where the interviewee is able to develop their own lines of thinking. This is particularly reflected through group interviews, where respondents are able to debate amongst themselves. Semi-structured interviewing enables subjective interpretations of the relationships between society and space to be explored. This is in contrast to simply providing a comprehensive summary of specific objective or quantitative information.

3.4 The Foxton Loop Interviews

I used semi-structured interviewing in this study to help determine the social construction of nature in the Foxton Loop conflict. It was deemed the most appropriate interview type, because it allowed for specific questions to be asked, while enabling answers to be probed

and relevant tangents to be explored. It did not stunt the interview into a cocktail of yes, no or anticipated answers. It was hoped that this approach would prove fruitful for analysis.

Extensive interviewing of several individuals involved in the conflict was not needed. Two to three people from each of the 'sides' of the conflict were sought for interviewing, along with a government representative. This was mainly because of the emphasis on the discourse analysis of documentary material in my research. Requests for interviews were made via introductory letter and information sheet in accordance with Massey University Ethics guidelines. Contacts were obtained via personal communication with individuals throughout the research and from documentary sources. Other names were obtained through 'snowballing' techniques.

Interviews were arranged by a phone call two to five days after the letters had been sent. Some individuals contacted the researcher to arrange an interview. The advantage of a telephone call was the ability for direct contact with the potential respondent, to help determine the potential value of the respondent and also to allay any concerns and answer any questions about the research. Six individuals were interviewed in semi-structured interviews of approximately one hour long. Three had been associated with the MCB 'side' of the debate, while the remaining three were sympathetic with the SFRA 'side'. A separate interview 'schedule' was used for both 'sides' of the conflict, in order to ask specific questions of the SFRA and MCB. Questions were collated on the basis of themes, determined from discourse analysis of key 'texts' in the conflict. Some questions were discarded, changed or added during the interviewing period, as their usefulness was determined.

3.4.1 Issues in Interviewing

A potential problem of my research was access to the people I hoped to interview. This occurred on two levels. Firstly, there was the problem of temporal distance, in that nearly a decade had passed since the presentation of the SFRA petition to Parliament. A possibility existed that some people had either moved from the area or had died. The former proved the case with one person. Despite being able to contact this individual, an interview was declined for the reason that the person had 'gone cold on the issue'. This sort of response highlights the difficulties in research of this nature, where people with a significant emotional attachment

to an issue can emerge at the other end hurt and frustrated. As a result, their response to anyone seeking information is resistance. As in this case, an interview with the individual concerned may have shed considerable light on the research, although it also may have psychologically affected the individual if an interview had occurred. The latter situation was also relevant to my research. One individual had passed on several years earlier and one individual also died during the course of the research, although an interview was conducted before this occurred. The historical nature of the research also had the potential to affect the quality of information obtained during my research. This was addressed partly through the use of prompts, such as the petition, to assist recollection.

Secondly, access may be limited by the status of individuals, particularly if they are classified as 'elites'. Generally, 'elites' refer to people from the higher echelons of society who are in responsible positions in large businesses or public groups (Healey and Rawlinson 1993, Moyser 1988). Access may be affected by 'protection' from personal assistants, a heavy workload or an unwillingness to be interviewed. This may reflect bad experiences with the subject covered in the research or a reluctance to disclose information which they believe would jeopardise their position. In my research, this did not constitute a major problem, although I was 'steered away' from one individual who was unavailable due to a heavy workload.

The pressure of time is also frequently a problem when interviewing 'elites', particularly during office hours. Interruptions from phones, personal assistants and unscheduled engagements were all experienced during the course of my interviews. This particularly affected one interview, which detracted from my ability to glean information from this participant. While 'elites' are often a prime source of information for research areas, their position may also dictate what is mentioned and what is excluded in conversation (Healey and Rawlinson 1993). A familiarity with being in control in various settings may be transferred to the interview situation. Both of these situations temper the sorts of information and insights interviews can produce. The validity and reliability of information can also be jeopardised if the research subject is 'sensitive' or indirectly raises questions on the competence of the individual being interviewed. In today's social climate, 'elites' are also aware of the need to temper what they say against the risk of defamatory action against them. These were issues

that needed to be addressed in the research that I conducted. I informed participants through the information sheet that their names would be protected during the research by pseudonyms. The pseudonyms used are non-gender specific names such as Chris to further protect confidentiality. I made this decision based on the public nature of the conflict. People's responses were potentially identifiable, with the possibility for participants to personally attack other individuals. While it was hoped that this approach would secure confidentiality, I warned potential participants that total confidentiality could not be wholeheartedly guaranteed.

The issue of the reliability and validity of information obtained is also important. Schoenberger (1991) defines validity as information which conforms to a 'true reality'. As McDowell (1992) outlines, this is contingent upon how different individuals interpret the 'reality' of an issue. There can be no guarantee for the researcher, that the same 'process' of interviewing will obtain similar or the same answers. Not only will this interpretation be different for each individual, but the interpretation of the respondent's answers will also be affected by the interviewer's personal biases and constructions. Analysis of respondent's answers needs to be carried out carefully and with full consideration for the interview context. Gendered relationships also play an important role in interviews (Oakley 1984, Herod 1993). Indeed, "interviewing as a research practice cannot be conceived as taking place in a gender vacuum" (Herod 1993, 306). This applies on a number of levels. The gender of the interviewer and interviewee, the influence of gender relations in the structure of particular research methodologies and the importance of gender assumptions in the interpretation of responses may all affect the interview process (Herod 1993).

Gender was important in my research because five out of the six people interviewed were white, middle to upper-class men. All of them had held positions of 'power' in their various settings during the Foxton Loop conflict. The predominance of male respondents was directly related to their 'leadership' of the primary groups involved in the conflict. Herod (1993, 307) identifies inherent problems in this, where frequently "the information provided by male sources will undoubtedly be refractive of their own gender (and class, racial and ethnic) subject positions and experiences". The woman interviewed was also pakeha, white and in an upper class bracket. In retrospect, more interviews with women may have been useful, and

also some of the 'lesser lights' of the conflict, although generally individuals were targeted who had had a significant role in the conflict. It was expected that these individuals would be the source of the most information.

3.5 Summary

This chapter has focused on the 'tools' I used in this investigation. My research focused on the two most important groups in the Loop conflict - the MCB and the SFRA. I undertook a discursive analysis of key 'texts' and interviews that were conducted during the course of the research. I have outlined these analyses in the following two chapters, and the constructions of nature which were drawn from them.

Chapter 4: 'The Place of Nature': SFRA constructions of nature in the Foxton Loop conflict

4.0 Introduction

I aim in this chapter to identify the discourses of nature that dominated the SFRA argument. The sources I will draw upon are the petition document (see Figure 4)⁵, the two SFRA submissions, and interviews conducted with 'supporters' of the SFRA. I have outlined the reasons for focusing on these 'texts' in Chapter Three. Discourse analysis acknowledges that discourses exist within other discourses and that the context or genre is all important. The genre of a 'text' dictates how they are designed to convey a particular argument and the transformations they may undergo.

4.1 Social Constructions of Nature and the SFRA

I argue that the SFRA drew primarily upon two discourses in constructing nature during the Foxton Loop conflict. These were reflexive of the technocentric ideas I have outlined in Chapter One. Firstly, the construction of the Loop rested in a Judeo-Christian worldview (see Section 1.5.1) where nature was understood as divinely created. God had carved into the landscape the 'ditch' through which the waters of the Manawatu River flowed. People, while also created in a Judeo-Christian worldview, were given the responsibility of caring for nature. While people are at the highest apex of creation, all other parts of the natural world are constructed 'below' human beings (Johnston 1989). Technocentric approaches particularly favour these ideas, with people regarded as maintaining the capacity to control and use nature primarily for human benefit.

Secondly, both the SFRA and the MCB drew upon a conventional Western discourse of nature (Metzner 1993). This approach is underlined by a Judeo-Christian worldview, but is focused around the idea that nature performs particular functions for people. Nature maintains little or no value in itself. Within this discourse, nature represents:

⁵ This figure will be used throughout the next chapter. All line numbers refer to this figure.

...an economic resource to be exploited in support of economic growth and technological progress and to be preserved in museums/reserves for the purposes of scientific study, general education, and in order to protect such as may prove valuable for future development and exploitation. (Haigh 1995, 205)

It is important to note here, that while I argue that the SFRA drew upon these discursive frameworks, their implications for how nature was constructed in the debate may not have been what was intended. The Loop was important to the SFRA, primarily because it could perform specific uses. I expand on these discourses below, where I argue that the SFRA used them to legitimate their argument for restoration of the Loop.

4.2 'Righting the Wrongs' - The SFRA, Morality and Nature

Within the Judeo-Christian worldview, the SFRA constructed nature on principally two levels. They drew upon the idea of morality. Morality generally refers to a sense of 'right' and 'wrong' associated with particular activities or actions. Certain activities within society are deemed more acceptable than others. A Judeo-Christian worldview, along with other viewpoints identify a certain 'brand' of morality. For example, within Christian circles, such activities as murder, rape and adultery are deemed unacceptable or 'wrong'. In contrast, other constructions may deem these activities justifiable or even acceptable. Within this Christian version of morality and generally throughout most of Western society, activities that are 'right' are constructed as 'good' while 'wrong' activities are constructed as 'evil' or 'bad'. This is reflected by writers of television programmes, movies and novels who often construct a virtuous and a wicked party or a positive and negative force.

Nature, also is endowed with moral power. It is represented as either 'good' or 'bad', healthy or contaminated, beautiful or unsightly, worth preserving or ordinary. Most people understand a beautiful or unique landscape, such as Arizona's Grand Canyon or Fiordland's Milford Sound as worth preserving in pristine condition. In places such as these, any interference with nature is judged from a more critical perspective. People's activities are strictly controlled by legislation and rules that ensure the preservation of these environments. These unique landscapes are contrasted with environments such as the Foxton Loop that did not command the same 'power' for preservation or restoration.

Firstly, the SFRA inscribed morality in nature's condition. The condition of the Loop, post-Whirokino Cut, was constructed as a problem. In the initial SFRA submission, the Loop was described as "a tidal brackish backwater", "[diverted from] its ancient, natural and historical course under 'normal' conditions of flow", and as "a pressing problem" (SFRA 18/6/86, Letter to IALGSC, p.2-4). This was also recognised by the SFRA interview participants. Bernie talked about the Loop as "...clogged up with weed and silt", "...a liability", "...silted up and grubby", and "...a dirty little stream". Chris described it as "...a cesspool with siltation" and "...a natural resource interfered with by man", while Damien suggested it was "a mess...", and "...narrow [and] ..dangerous".

This poor condition of nature was constructed by the SFRA as 'wrong'. It did not characterise acceptable nature. The river had been spoilt, primarily through people's activities in adjusting the 'natural' course of the Loop that caused the river to become choked with contaminants. The Loop was painted with negative rhetoric such as 'liability', 'cesspool', 'backwater' and 'mess'. This implied that it had been both contaminated and forgotten. It was only fit as a 'sewer', whereupon historically it had been a significant asset to Foxton township. Pollution and siltation were portrayed as serious threats to water quality, and implicitly any use of the river. The Whirokino Cut was represented by the SFRA as a 'wound' that had left its mark both on the Foxton Loop and Foxton township. The SFRA implied that the potential result of this action would 'kill' Foxton township. Without achieving some form of restoration, the future of Foxton was at risk. The SFRA drew upon medical discourse to encourage the healing of this wound. The Loop required 'resuscitation', resulting in a more desirable nature, while also restoring some of the 'economic' life of Foxton.

Healthy and inherently 'good' nature was constructed as nature of high quality. Healthy nature "...[flowed along] its ancient, natural and historical course.....", "...[was] navigable..", and represented "a clean, freshwater river flowing past its [Foxton's] doorstep" (SFRA 7/5/86a, p.1-2). The initial SFRA submission described it as "[Foxton's] birthright and natural heritage"(SFRA 18/6/86, Letter to IALGSC, p.1). Chris described 'good' nature as "...a valuable environmental resource...." and as the "...lovely wide Manawatu River....". Hence, 'good' nature was temporally associated

with Foxton prior to the Whirokino Cut (see Section 4.3). It was 'clean', consisting of *fresh* water and was aesthetically pleasing. It was also useable and valued according to the benefits it presented Foxton township (see Section 4.4).

In summary, the SFRA constructed nature's condition in two ways. Ideally, the Loop in its 'natural' and pre-Whirokino Cut condition was understood as morally correct. It was rightfully left as 'God intended', without interference by people and was linked to an ancient (Pakeha) heritage. It was nature of good quality, useful, aesthetically appealing and was historically appropriate to the area. 'Wrong' or 'unnatural' nature was represented as interfered with by people, primarily through technological means. As a result, its quality had been materially affected. The effects of this interference had caused poor water quality and a loss of amenity.

In light of these ideas, and somewhat ironically, the SFRA argued for a 'new' condition of nature. They required the Loop to be returned to a perceived 'superior' state. This was ironic in that any restoration could only occur through human interference with nature, precisely the factors responsible for the current state of the Loop. Any restoration of the Loop required removal of the land blocking the Loop from the Manawatu River, along with the stabilisation of river banks, upstream mitigation work and an ongoing maintenance programme. The MCB were unwilling to encourage any restorative measures, primarily because of the effects and costs upstream.

The second way the SFRA drew upon Judeo-Christian discourse was in discussing the actors in the conflict. Naturally, the SFRA framed themselves as the morally correct party. They had the 'right' for their claims to be listened to and addressed. They used a moral stance of 'good/right' and 'God-given' nature to justify their claims, arguing that they were addressing "an issue of NATURAL JUSTICE" (Fraser 7/5/86, Letter to House of Representatives, Original Emphasis). The people of Foxton had been sinned against - "man (*sic*) had interfered with nature and robbed our town and community and surrounding area of a valuable environmental resource" (SFRA interview respondent Chris). This crime was constructed as 'wrong', with the perpetrators portrayed as 'sinners'. The petitioners identified the Loop as a "God-given amenity" (Line 38) and a

“precious God-given asset” (SFRA 7/5/86a, p.1). For the SFRA, it was only fair - ‘natural justice’ - that the river was returned to a pre-Whirokino Cut state. This goal was viewed as a hugely positive measure, both for the Foxton community and regional Manawatu. It both recovered something of Foxton’s ‘natural’ heritage and identity, and provided a potential freshwater recreational resource for the greater Manawatu.

The 1980s Labour government, as the morally ‘wrong’ party, retained a “clear responsibility in this direction” (SFRA 7/5/86a, p.2-3). This government inherited the ‘wrong’ actions of the 1940s Labour government. The PWD and Labour government of the 1940s were portrayed as the villains. All actions, such as the petition were directed against them. The SFRA also sought to remind the elected representatives of Parliament that their positions were tenuous and ultimately subject to the will of the masses - “Therefore, we commend this issue to your attention, in a trust and confidence of your conscientious interest as our elected representatives” (Fraser 7/5/86, Letter to House of Representatives).

As a ‘victim’, nature was in need of saving. It was up to the ‘sinners’ (the 1940s Central Government) to restore the river to its former, rightful state. The SFRA drew from Biblical imagery in making this point. Repentance (or turning away from sin) was called for, with the added responsibility of redemption, reflected through a restoration of waterflow through the Loop. Some form of restitution was the ‘right’ of the SFRA and Foxton township. For the SFRA, the sins of the forefathers (the 1940s Labour government) were being revisited on the sons (the 1980s Labour Government). This drew from Biblical imagery, where it states:

...For I, the Lord your God, am a jealous God, punishing the children for the sins of the fathers to the third and fourth and generations of those who hate me, but showing love to a thousand generations of those who love me and keep my commandments.

(Exodus 20:5, Barker 1985, 115)

In this respect, the SFRA took on the mantle of the Christian God, enacting this punishment on the 1980s Labour government. This ‘God’ position further constructed them as the ‘right’ party and legitimised their claim for restoration. This was again ironic, because the SFRA derived legitimacy from claims that nature that had not been interfered with (or nature as ‘natural’) was right. However, they sought recourse in

technological solutions to fix the ‘unnatural’ nature created as a result of the Whirokino Cut. The ‘Loop as victim’ metaphor was also transposed onto Foxton township. Indeed, for some individuals, restoration of the Loop also meant restoration of the town.

The Whirokino Cut was constructed as initiating the death of Foxton as a place, which inherently meant the death of nature. As Chris stated “...I know that...they were warned that it would be the deathknell of Foxton and the river as we knew it, if they proceeded”. Any further deterioration of the Loop risked the future of Foxton - “...if we lose it, the town would be struggling.....I’d say Foxton would die...I think it would go down the tubes myself..”(SFRA interview respondent Damien⁶). For the Loop to become a ‘drain’ was understood as the ultimate degradation of nature. It was recognised that this was already occurring - “...it’s just getting worse and worse and now waters coming through....this will only be a drain shortly” (SFRA interview respondent Damien). The Loop, in this sense provided life support to the township of Foxton. However, although as functions associated with the Loop had diminished in importance, this life support was ascribed upon other alternatives, such as the promotion of a historic Foxton.

Some of the rhetoric used by the SFRA also construed the building of the Whirokino Cut as a ‘plot’ against Foxton township. For example, in the petition and submissions, words and phrases such as ‘devised’ (Line 17), ‘great injustice’ (Line 34), ‘depriving’ (Line 23), ‘whether by design or accident’, and ‘scapegoats’ were used. It was likely that this stemmed from confusion during the 1930s over the ultimate purpose of the Cut. The SFRA believed Foxton had been unjustly treated - “Foxton....has been the innocent party, severely deprived by the actions of the past” (SFRA 18/6/86, Letter to IALGSC, 4). The result proved this ill treatment:

Although there is some evidence to suggest that the then “Manawatu River Board” may have favoured the Whirokino Cut as a ‘river diversion’ rather than a high level by-pass for floodwater, the facts of the matter remain the same in the ultimate result.

(SFRA 18/6/86, Letter to IALGSC, p.2)

The SFRA further asserted their position through the use of bold type at key points in the text, particularly when discussing the ownership of the river. The ‘texts’ identified the SFRA as the only party (at least initially) with a valid explanation. Again, however, it

⁶ NB. Later conversation indicated he did not necessarily hold this view.

is important to acknowledge that the format of these documents was controlled by government models (see Appendix Three). They dictated what could be included and the procedures which needed to be followed. Hence, this 'control' was enforced within certain boundaries. Control was also reflected through the strong and assertive tone of the 'texts'. The SFRA ownership of the discussion and inherently the river framed them immediately as the 'right' party. There was an unmistakable appeal to Foxton's ownership of the river and the wrongs inflicted upon the people of Foxton, which engendered similarities to the taking of Maori land by Europeans in the 1800s.

The silence on the Maori connection with the river was significant. The only reference made to Maori was the following:

The insidious effects of subsequent flooding and a gradual siltation process with the Loop becoming a mere 'tidal backwash' have become increasingly obvious and now constitutes a danger to the future life of this once-proud 'founding town', quite apart from depriving *its citizens (Maori and Pakeha alike)* of their natural rights.

(SFRA 7/5/86a, p.2, Emphasis Added)

While Maori were acknowledged, it appeared that Maori were not strongly active in the SFRA action. As SFRA interview respondent Chris explained "...they [Maori] were very supportive of the petition and they were interested in the river. Naturally, it's their heritage as much as every European and other that lives in the Community". It was assumed that the natural rights of Maori were the same as Pakeha natural rights, that Maori heritage equated to Pakeha heritage, that Maori had also been deprived of the river and agreed with the thrust of the SFRA argument. The SFRA retained the 'right' to speak on behalf of Maori. No mention was made of Maori attachment with the river, which would have placed them as the original 'owners' of the river. Instead, Pakeha discourse and ideas were used to justify an essentially racist discourse, which while ostensibly acknowledging Maori, constructed the debate from a Pakeha perspective. Power was vested in Pakeha discourse to bring a solution on behalf of all other racial groups.

Ironically, following the failure of the petition, Maori were seen as the potential 'saviours' of the Loop. The increasing power of Maori land claims was acknowledged, although again it was *Pakeha* who had increased Maori awareness of their 'rights'. Chris

suggested that the advent of the Waitangi Tribunal had reminded Maori of their attachment to New Zealand:

...those sort of things [land claims] only seem to have arisen more recently with the Waitangi Tribunal making Maoris more aware of what their original heritage was.

SFRA interview respondent Damien also argued that any hope for the Loop rested in Maori attempts to have the Loop restored - "I reckon the local iwi should get stuck into government and get something done about it, get it back to how it was". Hence, ironically the failure of the SFRA action, saw them seeking recourse in a Maori discourse, the only possible hope for restoration of the Loop to SFRA expectations.

Hence, the construction of nature by the SFRA drew upon a Judeo - Christian discourse, which morally identified 'right' and 'wrong' nature. The Loop was a God-given amenity and had been unjustly stolen from Foxton township. The perpetrators of this crime were responsible for restitution. The identification of 'right' nature was firmly founded in a Pakeha discourse which constructed 'right' nature as of improved quality and usefulness, and which drew 'power' from the historical identity of the Loop and Foxton. I expand on this in the next section.

4.3 Place, Identity and Nature: The Value of the Foxton Loop

Not to put too fine a point on it, we live, breathe and excrete values. No aspect of human life is unrelated to values, valuations and validations. Value orientations and value relations saturate our experience and life practices from the smallest established microstructures of feeling, thought and behaviour to the largest established macrostructures of organisations and institutions.

(Fekete 1988, cited in O'Brien and Guerrier 1995, xiii)

The Loop was valued through historical lenses. These understood the Loop as intimately tied to the identity of Foxton. I focus in this section on the value inscribed in nature in the Foxton Loop conflict.

4.3.1 Ownership

A strong motif of ownership was evident through all of the SFRA 'texts'. This was alluded to through rhetoric like 'the first settlement' (Figure 4, Line 9), 'historic and natural' (Line 21), 'ancient and traditional' (Line 22), 'founding' (Line 23), 'natural heritage' (Line 24), 'historic rights and custom' (Line 31), and 'God-given amenity' (Line

38). Metaphors such as ‘birthplace of the Manawatu’ (Line 9-10) and ‘our Raison D’être as a town’ (Line 14) were also used. The initial submission labelled the Loop as the ‘gateway’ to the Manawatu (SFRA 18/6/86, Letter to IALGSC, p.1).

The history of Foxton was given significant weight in the SFRA ‘texts’. It was particularly used in legitimating the arguments of the SFRA. As SFRA interview respondent Bernie explained,

...it [the petition] was based on historic Foxton, birthplace of the Manawatu.....so it made sense, and it.....was historically correct in that that was the place that people came, that’s where the boats came, that’s where the goods were unloaded and then.....over to Palmerston North.

The prominent place of Foxton in the history of the Manawatu was further endorsed by historical writers (Pawson 1985, Saunders 1987, Hunt 1987). The initial June submission identified nine ‘historical facts’ associated with Foxton’s history and the construction of the Whirokino Cut. People’s stories of the Loop also depicted its inherent historical value. For example, as SFRA interview respondent Damien recollected,

I mean, it’s got a lot of history, the old port.....there were twenty eight boats moored down at Foxton here at one time. This was *the* port of New Zealand. Early days. They used to go....from here to Newcastle in Australia, pick up the coal and bring it back down here. And the railway line....the whitebait express we called it, used to take it through to Palmerston.....A lady used to hang a tea towel out of her house, a two storey house down there. She used to go down to the boat, and they’d take her down to Nelson shopping and bring her back the next day.....It’s got a massive amount of history.....and Foxton sort of works on history of the town.

Rivers tend to attract settlement and Foxton was no exception. The Loop historically provided a natural mode of transport, a source of water and effluent discharge and most importantly the site for the Foxton port. As Damien stated, at its height, the Loop was “*the* port of New Zealand”. This historical importance was linked to the role the Loop and Foxton had played in the initial settlement of the Manawatu:

...long before any overland routes by rail or road it [Foxton] provided the ‘gateway’ to the rich hinterland, leading to the early development of the now Palmerston North city per a horse-drawn railway through the bush, on wooden rails.

(SFRA 18/6/86, Letter to IALGSC, p.1)

It subsequently contributed to the title of Foxton as the gateway to and birthplace of the Manawatu. As Chris mentioned:

Foxton fathered Palmerston North....There was the first rail link from our port of Foxton to the clearing in Palmerston North which is now the Square....Foxton was the father of Palmerston North and the hinterland.

This type of statement highlights a gendered view of Foxton. The debate was primarily understood through ‘male eyes’, which was reflected in the rhetoric used, and the people who occupied the positions of ‘power’ in the Foxton Loop conflict. A predominantly male discourse resulted in the Loop dominated for its functional uses and then discarded when a better condition of artificial nature was discovered. This reflection on the Loop recognised that men had primarily been responsible for its use and management in particular ways.

‘Ownership’ of the Loop was also linked to the Loop’s construction as God-given. It was the responsibility of Foxtonians, given the Loop by God, to preserve and protect it from any potential harm. By virtue of Christian justification, they were the Loop’s guardians and were able to dominate and change the Loop to their perceived purposes. Ownership also implied the maintenance of the Loop in good condition as the perceived ‘right’ of Foxton township. The ‘ancient and traditional course’(Line 22) through which the Loop had flowed was the ‘right’ channel. It was God-given, and historically appropriate. Therefore, it was only fair that the river returned to this channel. The changes imposed on Foxton’s environment, while ostensibly for a positive purpose, had had a negative result.

The geographical location of the Loop also implied ownership. Foxton existed “by virtue of its establishment on the banks of the mighty Manawatu River, *with* a port and associated transport system” (Lines 10-12, Emphasis Added). This was Foxton’s ‘plot’, which had been consolidated by ‘human’ additions to the landscape. ‘Textually’ the petition and submissions fortified these arguments through the use of presupposition and intertextuality. For example, ‘*Raison D’être*’ draws upon other discourses and another language and is inherently subject to certain assumptions. *Raison D’être* is a geographical term expanded on by Hartshorne (1940, 1950). It refers in political geography to the reason for a State’s existence, the centripetal force which binds a State together and distinguishes it from surrounding States. The use of *Raison D’être* consolidated the argument that the Loop was the reason for the existence of Foxton. Historically, the Loop had held the town together. As Bernie argued,

It's like the focus of the town in a way. It's right there, swooping around the back door...of the town. And when you look down the side streets, you're looking at what used to be a magnificent river....

As Bernie suggested, the Loop had once been 'magnificent'. It had added to the atmosphere and aesthetic value of Foxton. It had been a 'focus' throughout Foxton. Most parts of Foxton had been able to access the river visually simply by looking down their street. It therefore deserved to be fought for.

The idea of ownership further legitimated the arguments of the SFRA. It identified Foxton as an important settlement in the Manawatu. Foxton was placed at the top of the hierarchy of settlements in the Manawatu. The impression was given that the rest of the Manawatu were indebted to Foxton. Therefore, any group claiming to represent Foxtonians deserved to be listened to, because they were constructed as having something worthwhile to say.

4.4 The Commodity of Nature

The SFRA also utilised a conventional Western discourse to discuss nature. This discourse primarily constructed nature as a resource - as a useable commodity and source of potential economic gain. Again, this was inherently linked to the social relations nature existed within. As Harvey (1980, 212) argues:

...a 'thing' cannot be understood or even talked about independently of the relations it has with other things. For example resources can be defined only in relationship to the mode of production which seeks to make use of them and which simultaneously 'produces' them through both the physical and mental activity of the users. There is therefore, no such thing as resources in abstract or a resource which exists as a 'thing in itself'.

'Resources' are generally understood as particular substances, organisms or properties which are utilised for the benefit of humankind. They are 'cultural constructs', meaning something cannot *be* a resource until it has been labelled as such. The idea of resource was closely related to value, meaning the ability of something to perform particular services or provide particular goods for people.

Obviously, water was the fundamental resource in the Foxton Loop conflict. Its manifestation in the physical form of a river provided opportunity for a range of resource

uses, from waste disposal to drinking water to swimming. These resource delineations were both culturally and historically specific. Rees (1991, 8) suggests that:

Conflicting assessments of environmental resources can exist even among individuals sharing a common cultural heritage and living in the same small community. What for a local farmer is a weed -strewn piece of unproductive wasteland could be a rich aesthetic and ecological resource to others. Such differences in valuations and priorities lie at the heart of many of the current conflicts over environmental protection.

On a small scale, the Loop as a resource fulfilled the above quote. For Foxton, the Loop's historical importance was inextricably linked with the development of Foxton and the greater Manawatu. Any future development of Foxton hinged around how the Loop could be utilised for Foxton's benefit. This view was not universal. It was place-specific to the Foxton locality. Areas upstream, which the SFRA argued were indebted to early Foxton, wanted the Loop to remain in its present condition in order to safeguard their lives and property. However, the diminishing size and quality of the Foxton Loop provided the source of the SFRA frustrations, and the focus of their attention.

4.4.1 The Loop as a Resource

The SFRA constructed the Loop as a resource in several ways. Fundamentally, the Loop was represented as an economic resource, both historically and potentially. This construction was linked to the idea of identity and ownership (see Section 4.3). The economic history of the Loop focused upon its use and designation as a port, and the regional development which had occurred as a result. As a 'navigable river' (SFRA 7/5/86a, 2), it had provided the point of trade and settlement for the Manawatu. The SFRA acknowledged that the ability of the Loop to perform this function had been lost. As Chris lamented, "[the Loop]....would never be viable as a shallow river served port from a commercial point of view".

Despite this, the Loop was understood as a potential 'money-spinner'. It could become a significant asset. In 1986, New Zealand was continuing to feel the effects of the wide-ranging changes instituted by the 1984 Labour government (Sharp 1994). These changes, along with the continuing centralisation of people and industries from rural to urban communities posed a threat to small provincial towns like Foxton. It was hoped that the Loop could provide a much-needed injection to the local economic development of Foxton. As Bernie suggested, "It was all aimed at putting Foxton on a sound footing and putting in a buffer against economic downturn.....If you could get the town with a

few more eggs in the basket rather than just one or two". This economic injection, at least for the SFRA focused around a redevelopment and restoration of the Loop as a tourist attraction. Any development would occur in tandem with the development of other historical landmarks in the township -

...we came up with the idea [that] we could capitalise on any of the advantages that the wee town had. And put together a historic Foxton....we managed to get money for the tram station, we got money for the Post Office to have it built in a historic way, we got money for the Audiovisual museum.....we were starting to put together a lot of things, and it was based on historic Foxton, birthplace of the Manawatu...

(SFRA interview respondent Bernie)

The SFRA aimed to channel the identity value placed in the Loop to revisit and utilise Foxton's heritage for the future development of Foxton. Visitors could come to the Loop, not only to enjoy various recreational pursuits, but also to gain an understanding of the history of the Loop and Foxton township, including the burgeoning flax industry which had existed in the late 1800s. Again, any development in this direction was reliant upon the wishes of the petitioner's being met. A favourable response from the government was crucial. Hence, restoration was not only linked to a better environment and the potential development of Foxton, but also to a restored relationship with the perpetrators of the crime.

The SFRA also constructed the Loop as the ideal environment for a range of recreational pursuits. These included boating, fishing, canoeing, swimming, rowing, duckshooting, wildlife watching and the passive enjoyment of nature. Although some of these have been maintained and even enhanced with the current condition of the Loop (i.e. duckshooting), others have been severely affected by the diminishing size of the Loop (i.e. boating). For the SFRA, "the loop, in general, had ceased to be desirable for Fishing, Swimming and Boating" (SFRA 18/6/96, Letter to IALGSC, p.3). The loss of these opportunities constituted a major reason for the actions of the petitioners. It was hoped that these opportunities could be regained. Recreation was therefore intimately tied up with the identity value placed in the Loop. Recreational opportunities were variously described as 'marvellous', 'incredible', 'unbelievable', 'beautiful', 'ideal' [for rowing], and 'desirable'.

The SFRA believed that the Loop presented a major opportunity as a recreational resource - "...we want restoration as a recreational facility and not as a potential cesspit at the back of the town" (SFRA interview respondent Chris). Recreation was identified as the most significant future 'industry' of the Loop, which as the petition mentioned could be enjoyed by future generations. The benefits of a river related tourist business (Steinbach 1995) was understood as potentially providing the future economic saviour of the area. It was anticipated that any restoration of waterflow could result in the Loop developing a reputation as a recreational facility. This would attract visitors to the town and also an 'established clientele' to utilise the Loop for the recreational benefits it could provide. Hence, restoration was intimately tied up with improving the image of the township and developing the 'nature' that existed. It was presented as a public good, bringing numerous advantages to the local area and regional Manawatu. However, this was conditional - "[the Loop] still has recreational benefits...if there's a clean water flow" (SFRA interview respondent Chris). The SFRA reflected a desire to both restore a leisure space which had been lost and utilise it as the future 'economic symbol' of Foxton.

The SFRA also recognised the benefits of the Loop as a hydrological resource. Today, the Loop exists primarily as a 'drain' for the Foxton and Moutoa districts. The main function of most rivers and streams is to exist as drains - to transport excess water from land to the oceans. The SFRA saw these functions as necessary, although they questioned the quality of the material flowing from this drain. Additions of siltation, weed and other waste created the situation where the Loop was regarded as unacceptable nature. They wanted a restoration of flow from the Manawatu River, despite an investigation that had identified the Loop as having a superior water quality to the main river. This meant that the water quality of the Loop would decline assuming water from the Manawatu River was diverted back into the Loop. Representatives of the SFRA acknowledged this, but saw the responsibility for addressing this problem as firmly upstream:

...we were later told by the Manawatu Catchment Board that the quality of the water in the Loop was superior to the quality of the water in the river, but that once the Regional Council gets the other parties like Palmerston North city that were discharging raw effluent at certain times into the river, and works at Shannon and one or two others discharging pollutants into the natural river. Once those problems were overcome by regulation and new practices, then the water in the river should hopefully improve to a

stage where it's still worthwhile having it coming through.

(SFRA interview respondent Chris)

Hence, any restoration of flow was conditional upon an improved Manawatu River. It was unclear whether the petitioners were prepared to accept Manawatu River water before this improvement in water quality had occurred. However, ironically assuming this was the situation, the Loop would remain unusable due to an inferior water quality, which was precisely the factor that the SFRA aimed to improve.

The SFRA also recognised the value of the Lower Manawatu Scheme. However, this understanding was based in a belief that the MCB had exceeded their mandate. For the Whirokino Cut to carry the entire flow of the Manawatu River was unacceptable in the petitioners' eyes. For example, as SFRA interview respondent Chris argued -

We felt that the Catchment Board's attitude was dominated more by their thoughts of preservation from flooding for Palmerston North city and farmlands from there down, but the Lower Manawatu Scheme, it effectively dealt with a lot of those considerations..... Actually when you go back to the time when they were putting in what was intended to be....only an overflow through the Whirokino, then strangely there was concern that the [main State] highway at Whirokino...was subject to flooding, but then Bob Semple erected the big trestle bridge which took away that concern from the point of view of highway maintenance and communication maintenance, so there was no actual necessity for the Whirokino Cut to become the main outflow for the Manawatu River. The original concept was a weir and a.....drainage channel which would take the excess water heat off the flood.

The indirect allusion to a 'plot' through some of the rhetoric of the 'texts' suggested that the SFRA also believed the people of Foxton were victims. Foxton as a place had declined in historical importance and was destined to the settlement 'scrapheap', where it would remain. While preservation of Palmerston North and other upstream land was important, the SFRA desired that Foxton move up the hierarchy of Manawatu settlements. The SFRA believed this decline was unfair, and 'natural justice' dictated that their symbol of economic prosperity (i.e. the Loop) was restored to its 'rightful' state. However, the SFRA's desires could only be attained through the use of engineering methods and equipment, the very factors which had condemned the Loop's future.

The Loop as a natural resource did not rate a significant mention. It was described in the 'texts' as a 'natural meandering river', 'magnificent river', 'gorgeous', 'marvellous', 'incredible', and 'amazing'. However, these descriptions were frequently associated with the activities which could take place on the Loop, such as boating, fishing and

swimming. The SFRA attached priority for restoration to achieve a *useable* Loop, rather than a 'natural' Loop. There was no overt recognition of the intrinsic value of the Loop, or a sustained effort to ensure it was returned to a 'pristine' condition.

4.5 Conclusions

This chapter has sought to identify how the SFRA constructed nature in the Foxton Loop conflict. Discourse analysis of the 'texts' associated with the SFRA revealed that this primarily occurred within a technocentric framework. While the Loop was recognised as a natural entity, rhetoric primarily focused around restoring the Loop for the benefit of Foxton and the greater Manawatu. Any desire to return the Loop to a 'pristine state', as encouraged through ecocentric objectives, was not evident. The SFRA conception of 'pristine' nature focused on the use and availability of 'fresh water' and the Loop's return to a traditional course.

The SFRA used two discourses to give 'power' to their arguments. Nature was constructed using a Judeo-Christian discourse which identified 'right' and 'wrong' nature. They believed that 'right' nature represented a return to a historical Foxton. The river had been unjustly interfered with by people. This 'sin' required redemption, which could only be secured through a restored Loop. It was the 'right' of Foxtonians to demand some form of recompense. This was intimately linked to the identity value of the Loop for Foxton. Historically, it had been the focus of the township. 'Ownership' of the Loop was God-given. Therefore, Foxtonians had the moral 'right' to dominate nature and were entitled to request the changes prescribed by the petition. It was envisaged that capitalising on this history could reverse the tide which had created a Loop of diminishing returns, both physically and economically. A restored Loop (at least, partially) had the potential to provide an 'economic buffer' for Foxton township against further decline.

The SFRA used selective historical representations were used as a potent justification for a favourable response to Foxton's 'great injustice' (Line 34). This excluded recognition of the undesirable effects of Foxton's historical industries on the river Loop. The flax industries had particularly affected the river environment with the potency and quantity

of their effluents. These representations were excluded to ensure that the SFRA claims of legitimacy and the SFRA construction as an innocent victim would be maintained. To the SFRA, it was 'only fair' that restitution was made, although this restitution was based primarily within a Pakeha and male representation. The SFRA failed to effectively acknowledge Maori and women's representations, along with other cultural groups. It was also place-specific, ignoring the 'rights' of people who lived upstream along the Manawatu River's 150 kilometre length.

Secondly, the SFRA used a conventional Western discourse of nature as a resource. The Loop had provided recreational, economic, and hydrological functions. These were again tied up in the historical identity of the Loop, where economically it had provided the symbol of 'economic prosperity'. It was hoped that this symbol could be recreated for future prosperity. These discourses were used to 'empower' the SFRA arguments. The Loop was a site of confrontational discourses (Duncan and Sharp 1993). The discourses embedded in Foxton by the SFRA were not abstract ideas, but constituted concrete understandings of the real world. They had substantive effects on the entities which they helped constitute and organise. They assisted in shaping the contours of the 'taken for granted world', and naturalised and universalised a particular view of the world and the participants within it (Gregory 1994).

As the victim of a past injustice, the SFRA required a return to 'acceptable' or 'true' nature. However, this hope rested in the same factors which had caused the initial deterioration of the Loop, namely interference with nature. They retained the 'right' to argue that any work to restore the river was legitimate. The SFRA focused on the restoration of Foxton's identity, principally through arguing the river Loop could be utilised for particular functions. It maintained little value in itself. Their main problem in this debate was not the river Loop or attempting to gain unmeasured support for restoration of the Loop. It was in ensuring that their discourses constructed the Loop as powerfully as possible, and achieved the success of their intentions. The 'place of nature' in this debate was to ensure it revived the place of Foxton.

Chapter 5: The Engineered 'Riverscape' - Technocentric Valuations of Nature and the MCB

5.0 Introduction

The instigation of debate by the SFRA in 1986 placed them (at least initially) in a position of power. They approached the issue initially with the only legitimate interpretation. This was enhanced through Parliament's consideration of the petition and the favourable response received by the SFRA. The petition, as the initial tool of the SFRA, was used to dictate the terms of the debate. It forced other bodies, such as the MCB, to state and defend their position on the Loop. In this chapter, I will discuss the MCB construction of nature. As with the SFRA, the MCB focused technocentrically on the Loop. I identify two main discourses these constructions of nature operated within. Firstly, the MCB drew heavily on engineering discourse to describe the Loop and potential solutions to the Loop problem. Secondly like the SFRA, the MCB drew upon a conventional Western approach to nature, which identified nature as useful for particular functions. However, both of these discourses were set within a scientific rationalist discourse which produced the power the MCB needed to 'create' nature in particular ways. The 'texts' I focused on were the MCB submission to Parliament, the Foxton Loop Flow Improvement Report and interviews conducted with people sympathetic to the MCB position. I have outlined my reasons for focusing on these particular documents in Chapter Three.

5.1 'Engineering Discourse'

Engineering language monopolised MCB discussion in the Loop conflict. It represented the most significant factor in the MCB's construction of nature. Examples of engineering jargon were present in several ways. MCB rhetoric described parts of the engineered landscape such as 'sluice gates', 'floodway', 'reinforced concrete weir', 'drain', 'stopbanks' and 'Bailey bridge'. A number of words had engineering connotations such as 'divert', 'benefit', 'fall', 'retain' and 'construct'. Some terms described specific engineering investigations and changes made to the environment. These included 'costly

remedial work', 'machine clearing', and 'model study'. Finally, specific terms were used to describe the operation of the natural environment. For example, 'normal flow', 'low tide', 'siltation', 'raised flood levels', 'tidal waters', 'land drainage' and 'stagnant water'⁷. It was obviously befitting that as the organisation responsible for managing the Manawatu environment this sort of rhetoric was used.

The perceived solution to the Loop problem was also founded in further engineering works. The Loop could not be restored without deliberately planning further changes to the 'riverscape'. Using engineering discourse, the MCB argued that a diversion of the Manawatu River into the Foxton Loop would require,

...a substantial reinforced concrete weir at the top end of the Cut.....substantial earthworks.....some dredging of the Loop.....the need to carry out extensive rock protection work....It would also be necessary to raise the Manawatu River stopbanks upstream for probably thirty kilometres to cater for raised flood levels....[and] a model study being carried out at a cost of at least one hundred thousand dollars.

(MCB 9/10/86, Letter to IALGSC, p.1)

This 'solution' was both expensive and hydrologically complex. The problem of cost was a major consideration in identifying potential solutions to the Loop problem. For the MCB, the 'riverscape' *was* 'natural'. The passage of time had justified the changes which had been made. A return to a previous state was now not only undesirable, but would change what existed and had been accepted as 'natural'. As MCB interview respondent Robin stated,

It's not a simple answer by any means. It's a major engineering investigation.....And this is a vastly greater....I mean, what you're talking about is...you're mucking around with a flood flow of about 4000 cumecs, which is about a 150 odd thousand cusecs, which is quite a lot of water.

Engineering discourse was 'married' with an appeal to common sense to consider the most reasonable approach to the SFRA request. However, without these measures the risk posed by the Manawatu River to the wider Manawatu would increase:

Closing or partial closing of the Cut would increase flood levels in the Manawatu River. This would necessitate extensive stopbank raising and would greatly reduce the ability of the Moutoa floodway to pass floodwaters as it was designed to do. (CDCB 1989, 16)

Using this rhetoric, the MCB created a 'riverscape', the environment in which it was working. It based its construction within particular discourses which assisted in giving

⁷ All examples from the MCB Letter to the IALGSC 9/10/86.

power to its ideas. An engineering framework was founded on a scientific and rational outlook and a Judeo-Christian domination of nature. It focused on changing nature to achieve an 'acceptable' and secure situation for the greater Manawatu. Within this, water was invested with diverse and changing meanings. As Cosgrove (1990, 2) argues:

...as with all brute facts of our existence, humans culturally appropriate water, and invest it with meanings. It becomes a metaphor mapped onto other dimensions of human existence, individual and social, material and spiritual. It is through the meanings that we give to water and to its geographical manifestations - in rivers, streams and lakes - that we come to understand it and to exert forms of human control over its inherent nature.

5.1.1 The Loop as a Threat

The 'nature as engineered' discourse was relevant in several ways. Firstly, flood control was championed as the central function of the MCB. Alex, another MCB interview respondent argued that,

It's [MCB's] prime focus was flood control, flood control on the Lower Manawatu scheme....our focus is still flood control. Our engineering focus is still flood control....engineers are trained to consider costs, things have gotta be economic to do.

This focus meant that the MCB retained the 'right' to change nature. It inherently meant that the MCB would first address flood control issues. It was based on a belief that the MCB had the scientific expertise and knowledge to 'hold' any floods to a specified design level. Despite this, Robin acknowledged that scientific discourse did not hold all the answers:

Rivers have a mind of their own, and they don't necessarily conform to purely scientific analysis, like scientists would like to think. For instance, if you discuss discharge in a river, I remember seeing a report from Christchurch where they have got plus or minus a 100% on one particular formula they used.....Now, I could rather go and guess and don't do all the sweat over the mathematics, which amounted to absolutely nothing.

The need to dominate nature was firmly founded in the idea of risk. Nature understood as a threat was a major foundation of MCB policy. Protection of lives, property and land was essential to the continued economic viability of the Manawatu. It was particularly important for the city of Palmerston North and outweighed all other uses, including water recreation:

Flood control is a pretty important issue. It's not like you're in Feilding, where the little Makino might jump out and cause a few houses all sorts of damage, but it's got a pretty strong weight, the idea of flood control versus water recreation.

(MCB interview respondent Alex)

Nature, represented by the Loop was constructed as a threat in primarily two ways.

Firstly, as a part of the Manawatu River, the Loop still retained the potential to flood

Foxton township. During flood time, substantial flood flows joined with the Loop via the Main Drain and Moutoa Floodway. Therefore, assuming a large enough flood, Foxton itself was at risk. The MCB argued that an intensification of the flooding threat to Foxton was the risk if the Whirokino Cut was changed in any way - "...no, it [Foxton] won't flood in a hundred year flood....it might be flooded if you put the river back"(MCB interview respondent Alex). Secondly, if the SFRA achieved their aim of water redirected down the Loop, this would pose a severe threat to the viability of the flood control scheme. The MCB constructed the Whirokino Cut as both an advantage and a necessity for Foxton township. Robin suggested its purpose was "to minimise flooding to Foxton town at the time", while Alex argued it was also 'to lower the flood levels, [and] to improve the drainage'. The Chief Engineer of the MCB stressed that the Cut would eventually have been built:

...I would also state that if the Whirokino Cut was not in existence when the Manawatu Catchment Board was formed, I believe that it would have been essential for the Board to construct such a diversion as a part of the Lower Manawatu Scheme.

(MCB 9/10/86, Letter to IALGSC)

The Lower Manawatu Scheme had been built with the Whirokino Cut in place. Any restoration of water flow through the Loop would have immediate effects upstream. As a part of this scheme, the Cut was indispensable to the drainage of Manawatu floodwaters. In this way, the MCB argued that the established Loop constituted 'right' nature. Not surprisingly, in response to the SFRA request, the MCB expressed a strong preference for no interference.

The notion of risk was tempered by the idea that rivers only constitute a threat when they place human life and property at risk. Indeed, "the fact that the Manawatu River does flood does not constitute a problem in itself. It is only when it is considered within the context of human occupancy that any problem arises" (McNeill-Adams 1968, 22). Hence, while the MCB constructed the river as a threat to the existing landscape, the context of human occupancy was the major reason for the Loop as a threat.

5.1.2 A Mandate to Protect

The MCB further justified the Scheme on the basis of the mandate given to them by legislation and the Manawatu people. They were responsible for ensuring all present day activities were maintained. Changes to the Loop would also endanger the viability of

some aspects of the Manawatu economy. MCB interview participant Sam, suggested that the advantages for agricultural productivity in the Manawatu of retaining the Loop in its present form far outweighed any return to a 'historical' Loop:

...nothing is impossible but miracles take slightly longer. And.....the miracle be whose gonna pay for a cost of anything being done like that. What are you going to do with the spoil you remove, what's gonna be the eventual flooding aspects again, if you did...force water to go back around there. You would then be going back to the 1860s, where your first petition went to Parliament, saying now there's a little wee piece of river here that...hasn't a heck of lot of water, and [is] stopping the drainage. Now, if you wanted to go back to that sort of situation... ..we're going to virtually destruct...something like ten thousand acres of very very fertile country through the Moutoa, which is producing a fantastic amount of dairy produce and the cropping as well....I feel it would be very much a very retrograde step to go back...

The Manawatu relied upon the Lower Manawatu Scheme to maintain the productivity and income drawn from the Moutoa area. Agricultural productivity was important to the economy of the Manawatu area, and was based in a colonial past (Phillips 1987). Power was gained through using the familiar dictum of rural New Zealand providing the traditional backbone of the New Zealand. The MCB were responsible for safeguarding what existed in an 'environmentally friendly' a way as possible. Their mandate bound them to the present Manawatu environment, and not a past use which retained a place-specific historical importance. They also secured 'power' from the *ability* of the Moutoa to produce. The land was fertile, and therefore retained a special capacity to produce capital return and investment for the Manawatu. It was important to safeguard against any loss of capital through both unnecessary expenditure (through changes to the Lower Manawatu Scheme) and losses in potential revenue. MCB interview respondent Alex endorsed this, arguing the debate:

...was dominated heavily by the river.....and the Lower Manawatu scheme was strongly there. There was no mandate to get rid of it [the Whirokino Cut]. There was no way they could undo it, we didn't believe, and the government were never going to tell the Catchment Board to fill in the Whirokino Cut.....There wasn't enough money around to do it. It would cost megabucks. Millions and millions to fill it in.....plus the upgrading of the scheme to cater for it. Just megamoney.

However, while Alex acknowledged this, the impact of the Resource Management Act (RMA) has created a new situation, where it is possible that works like the Whirokino Cut may not have been built. Indeed, as Alex explained:

You'd never put the Whirokino Cut in today. The Resource Management Act wouldn't let you....I don't think you ever rebuild the Lower Manawatu Scheme today. The Consent process would kill it, absolutely.

5.1.3 Reflections on Environmental Legislation

The influence of engineering discourse was partially contingent on the historical legislative changes which have occurred over the last sixty years. The mandate of the MCB changed in accordance with the development of environmental legislation in New Zealand. Management of water by the local state has evolved in New Zealand in an extremely fragmented fashion (Acheson 1968, Cocklin 1989, Bush 1995). Three major pieces of environmental legislation have contributed to the morphology of Manawatu waterways over the last fifty years. The 1941 Soil Conservation and Rivers Control Act initiated the development of Catchment Boards and required the MCB to “minimise and prevent danger by flooding” (Holland 1982, 18). The focus of this Act was firmly flood control. It heralded the construction of the Whirokino Cut and Lower Manawatu Scheme. This Act provided justification for MCB thinking on the Loop as it placed the construction of the Cut within a historical time period where these actions were constructed as acceptable. Flood control was the primary objective of this time period as outlined in Section 5.1.2. The mindset of this time period was summarised by Alex:

I think if it was already in its natural state, and hadn't been altered severely, then I think the Catchment Board would have been quite interested in maintaining the natural state. The Catchment Board of the eighties. The Catchment Board of the fifties, that was *hellbent* on flood control, environmental [considerations]....wasn't a major issue. Because actually people that were more important than fish in those days. They were definitely the focus. It was maximise production from the land, protect the people from flooding.
(Emphasis Added)

Subsequent legislation sought to temper the impact of this Act and focused on areas such as water quality and intrinsic values. The next major piece of ‘water’ legislation was the Soil and Water Conservation Act 1967. This Act significantly extended the duties of the MCB, requiring it:

...to examine all problems relating to natural water, and to plan for such matters as the allocation and quantity of water; the control of erosion on the banks of the rivers, lakes and coasts, and the control of flow and flooding in and from rivers and lakes; the conservation of natural water; and the needs of fisheries, wildlife and those who use the natural water for recreational purposes.
(Holland 1982, 21)

It aimed to achieve a more comprehensive approach to water management, focusing in greater detail upon water quality and usage.

Finally, the Resource Management Act (RMA) became law in 1991. This Act heralded dramatic changes in New Zealand’s environmental focus, promoting the concept of

sustainable management. It required local authorities to be responsible “for the guardianship of natural and physical resources to provide future generations with an environment which meets their needs” (MWRC 1994, p. i). The RMA continued the development of an expansive approach to environmental management, emphasising the intrinsic value of natural resources, the need to safeguard resources for future generations and respect for Maori environmental concerns. The power of environmentalist discourse has increased during the last thirty years due to increasing recognition of the importance of maintaining the environment in a ‘sustainable’ condition. This has resulted in an increased emphasis on environmental issues. As Alex suggested:

...in the old days...they just made decisions. But it was easier, because we were flooded all the time. People in the floodplain got flooded every year....Now, if you want to do something minor.....they’re [environmental groups] on your backs.....The environmental issue dominates.

Constructions of nature have developed around these Acts, based on their ‘picture’ of nature. The emphasis on social and cultural aspects of the environment has progressively increased with each new piece of legislation. Whereas flood control was initially a major preoccupation, conservation and protection of natural resources has today become the focus. Despite these changes in legislation, Robin believed they were largely ineffective due to an inability to finance them and the high expectations placed on scientific endeavours -

...You have a difficulty here, that under the legislation you are supposed to have an environmental interest. But it amounted to nothing, because it couldn’t be financed.....It’s just a bit of verbal garbage that’s put in there. I think, in the present climate, engineers have changed their attitudes.....Before, it was purely hydraulic information. You took a flood, and you dumped it in the sea as quickly as possible. Now they tend to interfere less with the natural river as much as possible.....things have moved on in the ensuing fifty years and there is a great deal more knowledge. It’s a case where people had rather a mechanical scientific attitude. And....rather too much was expected of engineers in my opinion. And they were put up on a silly sort of a pedestal.

(MCB interview respondent Robin)

The power of scientific discourse particularly affected early water management. Scientists who managed to devise systems to protect people’s lives and property achieved folklore status. As Robin stated “rather too much was expected of engineers in my opinion...They were put up on a silly sort of a pedestal”. Emphasis was placed on the

subjugation of nature for people's benefit. While early engineering approaches were partially attributable to increases in technical knowledge and understanding, they were also due to a dogged determination to protect people's lives and possessions at whatever environmental cost. Value was fundamentally placed in using science to 'better' the human condition.

5.2 A Conventional Western Discourse of Nature

For the MCB, a conventional Western discourse of nature revolved around two aspects. Firstly, and as I have outlined, it was contingent upon foundation in a scientific worldview which understood nature as separate from people. People therefore retained the ability to change nature into what was deemed appropriate and to conquer and tame nature according to the uses it could maintain. Indeed, "the human urge to modify and 'tame' nature seems an irresistible force" (Wilson 1992, 60). The engineered landscape of the Manawatu River was the most visible sign of people's modifications. This 'riverscape' was constructed in the texts through references such as 'concrete weir', 'stopbanking', 'radial gates', 'floodway', 'dam', and 'sewage plant'. The river was not defined on the basis of its natural qualities, but on the 'pieces' of river engineering of which it consisted. Therefore, nature, in the case of the Foxton Loop conflict was in the extraordinary position of being labelled 'unnatural'.

Secondly, nature's construction was contingent on the uses it could perform. Before European settlement, the Loop had been primarily used by Maori as a food source and transport artery. The advent of European settlement saw the river increasingly used as a thoroughfare servicing the Manawatu area. As a resource, the MCB recognised all of the functions that the SFRA had argued the Loop possessed. The MCB acknowledged the Loop had been a valuable recreational and economic resource. They also identified the Loop as a significant part of the historic life of Foxton and a potential part in the future life of Foxton. As MCB interview respondent Alex stated,

...the Loop as it was, when they brought sailing ships. That made Foxton. The reason that Foxton [was] there. It was a port. And to be able to create that environment again, if you bring in....old coastal trading type vessels...it would become quite a tourist attraction....A very valuable tourist environment.

However these uses were principally endorsed from an historical perspective - "Boating had gone, the harbour had gone. No one was earning a lot of money out of ships in great numbers into Foxton" (MCB interview respondent Alex). The Loop was no longer perceived as maintaining these functions. In using this argument, the MCB based their opposition for changing the Loop on a belief that it no longer had a functional use for Foxton residents. It was also unreasonable to expect these functions to become viable in the future. While all of these resource uses were recognised as important, the value placed in them by the MCB was significantly different from the SFRA. For the SFRA, how the Loop *could* be used in the future was primarily important. The MCB, on the other hand, focused on the maintaining the present uses of the Loop.

Hydrologically, the Loop, as a result of the Whirokino Cut became a part of the Lower Manawatu Scheme. Therefore, the MCB fundamentally regarded the Loop as a hydrological resource. As a part of the Lower Manawatu Scheme, it could not just be removed. It was integral to the viability and effective operation of the Scheme. This was clearly expressed in the MCB submission and Foxton Loop Flow Improvement Report -

I could not support the first alternative [closing or partial closing of the Whirokino Cut] because of the costly remedial work that would result and also the adverse effect on the land drainage in the area. (MCB 9/10/86, Letter to IALGSC, p.2)

Engineering studies indicate a restriction to river flow (through the Whirokino Cut) would be necessary before significant flow re-occurred through the Loop. Any such restriction would create major flood control problems. (CDCB 1989, 21)

The main reasons for arguing against a restoration of flow were the cost, and the adverse effects upon flood control and land drainage. It was also linked with protecting the valuable advances which had been made in development of Manawatu primary productivity. In addition to this, Alex suggested that any attempt for a restoration of flow would be a difficult, if not impossible goal to achieve:

...if you close the Cut again...the floodway wouldn't be effective....it wouldn't convey the water that it was designed to convey. So assuming that it's just not practical.....to alter the lower Manawatu scheme,...the cost is phenomenal.....then it's a no no. You can't shut the Whirokino Cut off. Physically, it'd be almost impossible.

Retaining the Loop was not only essential to the maintenance of the Lower Manawatu Scheme, but also to the performance of the Loop's local hydrological functions. The Loop was variously described as a 'drain', as having a 'flow carrying capacity'(MCB

interview respondent Alex), a 'passage for floodwater' (Alex), an 'old oxbow' (Alex), and a 'drainage outlet for Foxton stormwater' (MCB interview respondent Sam). Clearly, the primary MCB function for the Loop relied on its ability to drain excess floodwater, waste and wastewater from the Manawatu hinterland and Foxton area. The Loop was *needed* for these functions. It was therefore necessary to ensure that at least one end of the Loop remained open.

The MCB saw that the changes made to the Foxton Loop were necessary to protect the greater Manawatu and could not be reversed. For the Manawatu river engineers of the 1940s, and for the majority of Manawatu population, the Cut was a positive result. For the people of Foxton, the Whirokino Cut was akin to a 'disaster' (SFRA 8/6/86, Letter to IALGSC, p.1). However, its inevitable closure at both ends was not desirable to the MCB. As Alex explained:

ALEX We're busy reviewing the Lower Manawatu Scheme and we will find out how important over the next year and a half, how important it is to have a flow carrying capacity around the Loop. We may find that the Loop silting up so much we.....don't have the available passage for floodwater, and that will affect the performance of the floodway.
 MARK Would that change...the attitudes towards the Loop, do you think?
 ALEX It would, yes, because our focus is still flood control....Our engineering focus is still flood control.....It's basically turning into an old oxbow. But, we may change our minds if we find that we need more water load capacity than we actually have. But, it still might be cheaper some other way, than dig out the Loop.

The MCB therefore based their constructions of the Loop on the 'greater good of the whole'. To reflect their operating mandate, they were concerned about protecting the Manawatu region from the risk posed by flood.

Therefore, a resolution to the Foxton Loop conflict was only possible on the basis of maintaining the current capabilities of the Loop to drain Manawatu floodwaters. As Sam argued:

See, the Loop to my mind, is a...manmade oxbow lake. Virtually...an abandoned meander bend...as the engineers would say today.....I don't see that you can go back on that. But, whether or not we should be maintaining the Loop as it is now, and what you do to maintain it is, I don't really know. It is part...of a river control scheme.

The idea of a 'manmade oxbow lake' was significant for two main reasons. Firstly, it further indicated the subjugation of nature by people. The Loop was acceptable to the MCB and appropriate to the uses the MCB believed the Loop could maintain. Nature was subsumed within a technological scheme which focused on its domination, control

and inherent uses. Secondly, within this technological and cultural scheme, men had the major role. Historically, this was accurate because men were responsible for most of the decisions which changed the Loop. During the period of the 1940s, it had been 'a Man's Country' (Phillips 1987) focused around the pakeha male bastions of working the land, rugby, and beer. In particular, the managerial approach of the MCB ensured that nature was an adversary to be overcome. Indeed, "managerial actions in the masculine public sphere [were] designed to achieve a domestication of this nature...how water has come to be used by women and men is an issue of culture, gender and location" (Stratford 1995, 209-10). Women, within this construction were second-class and excluded, and dominated through a primarily patriarchal society. This patriarchal construction of society therefore resulted in nature's construction primarily through 'male eyes'. A male construction therefore ensured masculine goals and objectives.

5.3 'Natural Law'

While the 'texts' indicated a dominant technocentric discourse, there was also some recognition that river management needed to increasingly focus on leaving nature in a more natural state:

...there's not enough [money] to actually control the river as tightly as they used to.....The river needs to meander more.....and letting it do this achieves two things. It reduces the amount of.....erosion that goes on. It reduces the cost of protecting against erosion, and it creates a more natural environment. It puts riffles and pools back into the river, you get.....fishlife there.
(MCB interview respondent Alex)

A strengthening body of thought promotes the idea that 'natural is best'. Increasing technological and environmental knowledge has also inflated awareness of the effects of past action (such as 'cutting corners off rivers') on the Loop. However, as the preceding quote suggested, this was only a result of decreasing finances and a burgeoning environmental lobby. Alex elucidated that not only has this awareness increased, but it has also resulted in a concrete decision not to engage in these solutions, because of the adverse effects they are now perceived to have:

A lot of bends have come out of the Manawatu over the years. But we don't do that now. We're more conscious of the adverse effects. In terms of the environmental side of it, keeping the river.....in a more natural state.

It is questionable where this change of attitude has stemmed from. The possibilities pointed to either decreasing financial resources to maintain a 'tight control' over the

river system, a genuine increasing awareness of the risks to ecosystems of particular engineering methods, pressure from environmental groups and individuals or a change in the intrinsic value placed in the environment. Alex also suggested that the value placed on the environment has changed:

It depends on what value you put on environmental issues....when you've got a pristine environment, and you bugger it up, we're very aware of the need not to bugger it up, by doing something bad. But where it is already in place.....we don't put a value on restoring it. Because partly the....restoration won't actually achieve a lot.

From the above quote, value in this sense referred to the ability of nature to remain 'pristine'. For the MCB, it appeared a 'pristine environment' was the ideal, with activities which changed the 'pristine' less desirable. However, for the Loop it was seen as too late. It occupied a neutral position, where it was 'already in place' and therefore acceptable as it stood, because it performed what the MCB regarded as its most useful function.

The MCB also argued the river environment retained the capacity to act 'naturally' to 'cut' itself off. As a meandering river, the natural action of the Manawatu river was to create loops over time. As Selby (1985, 284) explains,

In the process of migrating, a meander loop becomes increasingly sinuous until it is cut off either at the neck or by the formation of a *chute* along a swale between two point bars. The cut-off loop is then abandoned and becomes an oxbow lake when the ends of the loop are plugged with bank deposits alongside the newly cut shorter and straighter channel. Oxbow lakes are temporary features which are eventually filled with organic matter and sediment deposited from overbank flows. (Original Emphasis)

This was a natural consequence of the Manawatu river type. A meandering river would wind its way across the landscape in a random pattern. The meanders created would narrow at the neck over time. A channel would be cut across the neck by the force of water, eventually taking the full force of the river. The cut-off Loop would become infilled with silt and other deposits until it became 'normal land'. However, this was likely to happen over hundreds of years, rather than the short period of time it took to build the Whirokino Cut. Hence, the MCB used this argument to suggest the Whirokino Cut was a precursor to what would have eventually happened anyway. As MCB interview respondent Robin suggested, ".....it is a very big Loop, and the natural tendency of a river is to move to cut that off. So, it is quite likely to happen.....and grow another Loop". While this was not 'scientifically proven', experience and research indicated that this was the pattern which meandering rivers followed. Indeed, cutoffs like

the Foxton Loop are present along the length of the Manawatu River, including within Palmerston North city. As Alex stated “they were all the way down the river, you could see them....Major cutoffs occurred. One.....could have argued that it would have happened eventually in any case”. The MCB then argued on the basis of ‘natural law’, which constructed their intervention as legitimate. It would have happened anyway, and they therefore were not doing anything ‘wrong’. They constructed the changes to the Loop as facilitating a natural process. They were ‘helping’ nature perform a ‘natural’ function. Therefore, people were inscribed with the power both to change nature, and to model ‘natural processes’. As an inherent part of nature, people occupied a hegemonic position, one which enabled them to control and dictate how nature ‘behaved’.

5.3 Conclusions

In light of the SFRA constructions, ‘wrong’ or ‘bad’ nature was nature which exceeded the limits people had placed on it. It was ‘out of control’ nature and retained the capacity to damage people and property. ‘Good’ or ‘right’ nature represented nature which people had been able to control and existed within people-imposed limits. It performed only functions people allowed it to perform. In addition, nature which remained in its ‘natural’ condition was regarded as ‘good’, and as a result of environmental legislative developments a desirable goal to maintain.

Thus, the MCB created two ‘pictures’ of nature - ‘artificial’ and ‘wild’ nature. People played a major part in shaping ‘artificial’ nature. People were inherently a part of ‘artificial nature’ and were therefore responsible for its construction. ‘Wild’ or ‘natural’ nature represented a potential threat to humans as a result of natural excesses which pushed it beyond humanly-constructed boundaries. ‘Wild’ nature represented something which people had no control over, and therefore remained distinct from people. ‘Artificial’ nature was designed to protect humans from ‘wild’ nature. However, ‘wild’ nature did retain some uses. It particularly retained the capacity of self-regulation - “....floods and flooding are in actual fact a natural event and they scour the channel out, and keep it fit, in a sense to carry the discharge that you will get in flood time”(MCB interview respondent Robin).

The Loop occupied a tenuous position between these two types of nature. It had been artificially created as a result of the Whirokino Cut. However, in another sense, it was discarded nature. This was reflected in such phrases as 'abandoned meander bend'. The MCB description of the Loop as an 'abandoned' or 'cutoff meander bend' (CDCB 1989) implied that its use as a primary river channel was over. While historically it had been a symbol of Foxton's prosperity, these assets had been removed from it through no fault of its own. The source of the identity and value historically vested in the Loop had been literally cut-off, drained from the Loop and future of Foxton township. People had determined that the Loop's future role was to act as a drain for floodwaters and other wastewater products. For the MCB, the Loop was constructed on the basis of the most acceptable functions it could perform for the Manawatu region, rather than the local Foxton area.

The MCB was fundamentally opposed to the restoration of any significant flow through the river Loop. It was seen as both financially unrealistic and hydrologically impractical. Any re-establishment of flow through the Foxton Loop was inadvisable, primarily because of the detrimental effect on the present flood control system on the Manawatu River. The MCB position was favoured by many of the government bodies involved, such as NWSCA and the MFE. However, despite this clearly established platform, some sympathy was expressed from within the MCB for the Foxton predicament. As MCB interview respondent Alex stated, "Yes, if I was in their shoes....I'd probably be chasing the same thing". The SFRA argument was therefore recognised as containing some inherent validity, even if its implementation was impractical.

The mandate of the MCB meant it was required to manage the river environment. With this in mind, it was hardly surprising that the MCB construction of nature revolved primarily around the Loop maintaining the performance of its present functions. Nature as a threat was a central pillar of the MCB response to the SFRA action. This was represented by both the physical threat posed by floodwaters and the economic threat posed if the Loop was restored in any way. They particularly used the power of a scientific worldview to construct the Loop. The rhetoric used from within an engineering discourse created a 'riverscape' that was regional in context and intimately linked to the

functions that the MCB perceived the Loop should perform. In its present state, this function was as a hydrological resource, which maintained the effectiveness of the Lower Manawatu Scheme and local Foxton uses. The MCB also drew upon a conventional Western discourse of nature, where nature was understood as performing or facilitating economic functions. The Loop's value was based on its ability to continue to perform these functions within 'designed' standards.

The power vested in scientific discourse needed to be transferred to another powerful discourse if the environmental problems of the Foxton Loop were to be addressed. This is a difficult proposition, particularly from within scientific discourse. For the Foxton Loop conflict,

...the claims of scientists [MCB] for determinancy was first and foremost a legitimate rhetoric which helped constitute the 'actor-networks' of which they were the key members, but which stretched far beyond science in the materially ordered society. Perhaps the worst problem in this is that scientists believed in the validity of this rhetoric, thus preventing their solutions from taking into account the local knowledge of lay actors involved in ecological crisis points. (Szerszynski and others 1996, 8)

In this way, the natural landscape of the Loop was inseparable from the social landscapes within which it was embedded. Both the SFRA and MCB constructed nature based on the functions it could perform. These functions were valued according to the mandate of each of the groups. While both groups used a technocentric framework in their constructions of nature, their utilisation of it occurred in differing ways, and operated to create and sustain conflict, one that was unlikely to be resolved. The eventual solution to the conflict did not rest in physical attempts to change the Loop, but rather the discourses that were utilised and contained the most 'power'.

Chapter 6: Discussion and Conclusions

6.0 Introduction

The Foxton Loop conflict happened as a result of a petition forwarded to the New Zealand Parliament in 1986 by the SFRA. The conflict occurred over eight years, although its historical background stretched back fifty years. While the conflict involved several organisations, I focused on the two most important groups, the SFRA and MCB.

I focused on the idea of 'nature' with reference to the Foxton Loop conflict. In doing so, I argued from within a 'constrained constructivist' framework, and sought to answer two major questions. Firstly, I aimed to identify how nature was socially constructed by the SFRA and MCB in the Foxton Loop conflict. This discussion was based in the discourses used in the Loop conflict, and how meaning within the framework of these discourses was produced and re-produced in nature. I argued that both groups used discourses within a fundamentally technocentric framework where the rights of people to change the environment they lived within remained paramount. Secondly, I aimed to identify the importance of these social constructions for both groups. Within the context of this second question, I particularly aimed to explain how each of the discourses these groups used legitimated and gave power to their arguments.

As has been outlined, the conflict occurred over the Foxton Loop, a part of the Manawatu River, which was cut off as a result of the Whirokino Cut in the early 1940s. This severely affected the size and quality of the Loop. The building of the Cut caused considerable animosity between Foxton locals and the instigators of the Cut. This has simmered under the surface over the years, occasionally boiling over into more concrete action. One such 'flashpoint' occurred during the mid 1980s, when a group of mainly Foxton residents formed the SFRA. They presented a petition to Parliament requesting, at minimum, a greater flow of water through the river Loop. While this petition spawned further action and investigation, ultimately it failed. The condition of the Loop today is continuing to decline. MCB interview respondent Robin suggests that the Loop is effectively a 'dead' issue - "I wouldn't say it's a dead duck, but it's a duck that would

need a lot of resuscitation". It is likely that geologic time will render the Loop useless as a waterway, unless human intervention revives the waterflow around the Loop.

The SFRA and the MCB both constructed nature using a technocentric discourse, although they used this against one another. They focused on the uses the Loop could provide, drawing from other discourses to legitimate their positions. The SFRA drew particularly from a moral discourse based on Judeo-Christian principles and a conventional Western discourse of nature. They argued that the Loop represented a major part of Foxton's identity as a 'place'. This identity was founded in historical and resource values, which reflected a colonial heritage where the Loop had provided the focus of the township. For the SFRA, restoration of the Loop was a moral responsibility, a God-given right of Foxton. The SFRA believed the people of Foxton had been wronged, and constructed the loss of the Loop and any potential solution within a Biblical framework of sin, repentance and redemption. For the SFRA, it was a local issue which required a regional solution.

The MCB argument also revolved around a traditional Western discourse of nature, especially drawing from an engineering discourse which emphasised the flood threat and measures taken to combat it. Engineering discourse was underlain by a fear of nature's excesses. The MCB drew heavily from the 'power' of scientific and rational discourse to justify their position. The conflict was a regional issue, with the MCB responsible to the people of the greater Manawatu. They acknowledged that the Loop had been sacrificed for the greater good of the region, enabling protection of settlements and land upstream of Foxton. For the MCB, retaining the current state of the Loop was fundamental to the Lower Manawatu Flood Control Scheme. They were concerned with satisfying the objectives attached to the region as a whole and thus maintaining the status quo.

I aim with this chapter to draw this discussion to a close and make some conclusions about the conflict, social constructionism and nature. I focus initially on the idea of the technocentric platform utilised in the construction of the Foxton Loop.

6.1 'True' Nature?

One of the underlying questions of the Foxton Loop conflict was what constituted 'right' nature? For both groups, this was bound within a technocentric construction of nature. The importance of a technocentric approach was further endorsed by interview respondents through a question regarding perceptions of an 'ideal' Foxton Loop. Both groups focused their picture of 'ideal' nature around technocentric objectives such as the satisfaction of individual and community needs. The SFRA suggested the Loop would be aesthetically pleasing and an asset to the township of Foxton. Their viewpoint was focused on what nature *could do* for Foxton. SFRA interview respondent Damien suggested that:

...it'd be gorgeous. Oh, it'd be absolutely gorgeous. The recreation that could be done on it.....The recreation would be unbelievable, but also for the birdlife.....I've seen old photos of the old days what it was like. It was absolutely beautiful. That's all gone. And I don't ever think they'd get it back.

Chris, another SFRA interview respondent also identified the Loop as a valuable recreational asset: -

...I think what should be concentrated on is maintenance of the waterway, preferably with an injection....of fresh water from the Manawatu River entering at the Northern end and allowing a certain flushing effect. I think....it could be still quite a valuable resource in a recreational [sense].

Recreation was an important part of the Loop's and inherently Foxton's identity. While the Loop had been primarily useful as an economic resource during its heyday, the SFRA saw that its future value rested in the provision of recreational opportunities. SFRA interview respondent Bernie added to this by suggesting that an ideal Loop would aesthetically advantage Foxton:

...You could see that it...could be a wide slow flowing river, that's clear...as parts of the Manawatu are in other regions as it flows through.....you could look down the streets of Foxton, and see an expanse of water. And it really could have been a great asset....and.....apart from looking good, it would have been useful.

The proximity of water to Foxton was constructed as providing something extra to the township. A 'wide slow flowing river' and 'an expanse of water' was inherently linked to improving the image of Foxton, and making it a more attractive place to visit and live.

The MCB representatives agreed that a restored Loop would constitute an ideal Loop. However, this conception was enclosed within particular boundaries. MCB interview respondent Sam found it difficult to conceive of an ideal Loop altogether. Sam's mindset

suggested that ‘manmade’ changes to the Loop had determined its future, and these were difficult, if not impossible to reverse:

What’s an ideal Loop? Dunno here.....See, the Loop, to my mind is a manmade oxbow lake...an abandoned meander bend as the engineers would say today....It is part of a river control scheme. Now, under the River control scheme, a flood over a certain size is then diverted from Moutoa through the flood channel into the Loop.....You can’t go back to what we had fifty, a hundred years ago.

However, Sam also suggested that what remained could be used for ‘the glory of Foxton’. While restoration was not a viable proposition, the Loop could be utilised for a number of mainly recreational purposes:

...I believe that it [the Loop] should be kept open.....you can certainly look after the centre part of it and try and keep it comparatively useable, by or for sporting activities, for pleasurable activities, for people to walk along, to look, to be a sanctuary in many respects. Foxton is trying to get ahead as far as a tourist place is concerned.....there’s been talk about a marina here from time to time. I believe there are differences there, but if we can have one to draw sightseeing boats on the river, and if we can have the canoes there, so the kids can get out with their paddles and boats and that sort of thing. If you want to have a few sculling races, this type of thing.....yes I think absolutely good.....very very good indeed.

Other MCB interview respondents linked an ideal Loop with the restoration of water flow and maintenance of water quality. This was scientifically based on a belief that a certain amount of water was needed to keep the Loop in good condition, and to flush out pollutants and weed. However, as Robin suggested, it was tempered by the natural action of the river to move to cut itself off:

Well, if you wanted to put it back as an ideal Loop, you would have to put the annual river flow through it, to keep it in reasonable condition, more than that, you would probably want a ten year flood to go through. So, that’s more or less getting back to the Loop, to its original condition, so that it’s got a flow that will flush it out, and look after it. But, at the same time, it is a very big Loop, and the natural tendency of a river is to move to cut that off. So, it is quite likely to happen, and then it would start, and grow another Loop.

Similarly, another MCB interview respondent Alex believed that an ideal Loop was linked to the river running back through it. This was again viewed as unrealistic in the present situation:

An ideal Foxton Loop would be the river running back through it, without a doubt. But in light of the restraints we have, I think an ideal state would be a lot of that muck cleaned out, and a piece of river around the town. Create a really nice piece of recreational water, with nice riverbanks. It’ll never...never go pristine clear, like.....some rivers, but.....it [would not be] silty all the time.

The SFRA conception of ‘ideal’ nature was intimately linked to resourcefulness, an improved image for Foxton, and sufficient quantities of clean water to produce the

previous attributes. Similarly, the SFRA conception of 'true' nature (see Chapter 4) was useful and alterable, and tied up with historical identity. The MCB linked 'ideal' nature to the restoration of waterflow and a clean and useable river. However, for the MCB (see Chapter 5), 'true' nature was also controlled. It could be interfered with, although in their opinion what already existed was close to 'ideal'. The MCB were constrained by the boundaries that dictated their professional judgment and equated to scientific reason and common sense. Both of these groups used technocentric ideas where people and their uses of nature were paramount. Nature was understood as a machine which could be controlled, regulated and used for varying purposes. Technology was a major tool in its management.

What are the implications of this approach for nature and decision-making? While both of these constructions retained an inherent validity to the groups who used them, ultimately only one construction would influence a solution to the problem. The strongest construction, framed within appropriate power relations was likely to succeed. The constructions, while based on a similar foundation differed in several significant ways. Firstly, they were invested with differing amounts of power. The simplest definition of power refers to "the ability of something to achieve certain ends or influence" (Johnston 1994, 469). However, as Foucault outlines, power and knowledge are intimately linked to one another:

Power produces knowledge...Power and knowledge directly imply one another...There is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations.....In short, it is not the activity of the subject of knowledge that produces a corpus of knowledge, useful or resistant to power, but power-knowledge, the processes and struggles that traverse it and of which it is made up, that determines the forms and possible domains of knowledge. (Foucault, cited in Grenz 1996, 132)

The SFRA construction drew upon a moral and local base. The strength of their argument was based in historical attachment to the Loop and the need to secure an attraction for Foxton that would enhance its potential as a tourist destination. Their power was founded in history and identity, and a sentimental hope that this would secure an improvement in the current situation. Their powerbase was local and held primarily local appeal. The MCB position, on the other hand, was justified by a scientific and rationalist commonsense approach, backed by a regional mandate to protect people and

property from the threat of flooding. They recognised the power of the river to physically damage and used this to endorse their position of no interference. This power produced a belief that the Loop was performing the most effective and valuable function that it could perform at that time in that place. Scientific notions of nature provided the 'right' answer, whereas local knowledge and sentimental attachment were viewed as less important and incidental. The scientific worldview inevitably lent more power to the regional construction of nature because it retained broader appeal. The power invested in differing discourses was vital to their widespread acceptance.

In a sense, the conflict was a discursive 'battle' between scientific and religious formations, that engendered similarities to the Scientific Revolution which had dethroned the Enlightenment religious worldview. This power drew upon hegemonic masculinity, through prioritising masculine conceptions of nature related to a colonial 'man of the land' theme and the traditional ability of 'men' to dominate nature. Other groups, such as women and Maori were implicitly excluded from the constructions of nature. Nature, within the Foxton Loop conflict was fundamentally constructed through male, Pakeha eyes, with a strong dose of historic identity. The lack of attention to these other viewpoints detracted from the representation of the Loop. It was therefore not unexpected that the approach invested with the most power - a primarily male view of nature as controllable and constructed as a threat - would strongly influence the final decision.

The implications of these differing but powerful constructions were threefold. Firstly, the SFRA approach was initially disadvantaged. Their approach maintained the least power, and was therefore the least likely to succeed. For a solution to work in their favour, their constructions needed to be based on approaches which firstly retained popular appeal and secondly held a certain amount of 'political clout'. The MCB, on the other hand, used an approach that was favoured and respected. Scientific endeavour equated to 'proven fact' and therefore this construction was the most likely to succeed. This was further consolidated through the democratically elected regional mandate the MCB was fulfilling. Secondly, the power invested in these constructions also had implications for nature. Nature retained no right in itself. Any intrinsic value associated with nature was

swallowed in the discursive 'war' between the SFRA and MCB. These groups, and particularly the MCB retained the future of the Loop within their sphere of influence.

Thirdly, differing constructions also meant that resolution was a complex goal, particularly when these arguments were coherent within their own constructions. Each group believed it was 'right', and argued on this basis, using the power invested in their construction of the Loop to further endorse their position. In this respect, a resolution needed one of the groups to depart from their position. This was unlikely to occur, because of the powerful position the MCB maintained through their construction of nature. This raises the question, therefore, of how a resolution can occur when constructions of nature are so different. A technocentric platform meant the Loop was respectively defined on the basis of its most valuable uses. Without a change in the dominant understanding of people-environment relations, it was unlikely that the SFRA would secure the goal it hoped for.

6.2 Reclaiming Nature

What implications do these ideas have for people-nature relations? Is use of a social or constrained constructivist approach a fruitful avenue of knowledge? Can people realistically move in this direction for the solution of local and global environmental problems? Does postmodernist epistemology actually make a difference in the world 'out there' (assuming, of course, there is a world out there)? While my thesis has not set out to answer these questions, it is useful to provide some initial comments here. I suggest that a preoccupation with 'pure' social constructionism can be dangerous, although I acknowledge the usefulness of the basic tenets of social constructionism (see Section 1.1.1). These basic tenets are applicable in my reading of the Foxton Loop conflict. I have approached it from within my own cultural and historical interface, my own worldview, values and ideology. It is a partial viewpoint, a 'truth' from my perspective and relationships. The postmodernism dictum, "all is difference" (Grenz 1996), is just as applicable here as in any other piece of research.

The elimination of the nature-people dualism has been encouraged through social constructionist thinking, and by numerous authors such as Evernden (1992):

...it is fair to say, that before, the word was invented, there *was* no nature. This is not, of course, to suggest that there was not the entities and phenomena we now attribute to nature, but rather to say that people were not conscious of there being any such entity as 'nature'.
(Evernden 1992, 89)

The disappearance of the nature-people dualism has been superseded by the idea that everything people know is a construction. People are therefore intimately linked to nature.

The nature-people separation is founded in how people have constructed this dualism. The possibility of a 'thing' called nature creates an object to describe and examine. It is only as people have given nature its 'word-cage' (Evernden 1992) that social action and processes have operated to change and develop 'nature'. In this way, it is difficult to talk of nature as 'pure'. Indeed, parts of nature physically untouched by human influence are rare, if not impossible to find. For example, an area of nature that is still a relative mystery to humanity are the deepest parts of oceans. Scientific knowledge is only beginning to attain the ability to explore and understand these areas. However, this does not suggest that this part of nature is not socially constructed. Understandings of these 'pure' areas are reliant upon their construction through movies, novels and other suchlike methods.

However, to accept the above suggestion that nature is 'totally' socially constructed is to suggest that "we are left with the paradoxical outcome that changes in knowledge lead to changes in the physical reality" (Gandy, 1996, 34). If all voices are important and acknowledged from within a postmodernist discussion, does nature retain a voice? The Kilauea volcano in Hawaii erupts continuously spurting molten lava into the air and streams of lava into the ocean. A legend has built up around the idea of Pele, the God of the volcano, who because of the incursions people have made on the island is punishing the inhabitants. While people are responsible for these constructions, they are not the creators of the molten lava which continuously flows from the volcano. This surely, is simply nature. The only other alternative is to place this responsibility on the shoulders of some higher being, such as 'Pele', which effectively destroys the scientific worldview. If the former viewpoint does retain some value, then does it not suggest that nature as 'nature' must be also included in understanding of the world?

The technocentric framework espoused within this thesis continues to be prominent in today's supposedly environmentally aware age. Nature, as technocentric views dictate was fitted around the human situation. Neither group indicated a leaning towards the value of 'intrinsic nature'. Meaning was contested, based on the power that could be retained to achieve 'true' nature. The question remains, therefore, of what would have occurred if the debate had been argued from within a more ecocentric framework which upheld the value of nature in itself. I suggest, that the only way to attain any resolution is a change in our construction of and attitudes to nature. It is, in essence, to move towards an ecocentric philosophy, which maintains the intrinsic value of nature. It is important to be aware of how nature is constructed and the underlying discourses used to represent nature. It is the power invested in and through these constructions which influences decision-making. However, with this in mind, to reclaim nature, I suggest an approach needs to be designed which bridges the social constructionist and dualistic paradigms, which while acknowledging an inherent physicality of nature exists, is also willing to present and encourage an approach to nature which acknowledges people's indispensable influence.

I believe an approach which fosters these ideas will have a number of implications, and encourage an improved approach to natural and environmental management. For example, a wider focus on a range of perspectives will lead to a deeper understanding of nature and the discourses which underlie nature's construction. It will also involve frequently excluded viewpoints leading to a greater accommodation of 'minor' perspectives in the management of natural entities. This may assist in identifying the value of natural entities, which exist 'below the surface' of different group's arguments such as the SFRA. This type of approach may also diminish the value of the commonly held perspective of nature as a resource, and only useful in terms of the functions it may fulfil. This may assist in ensuring it is valued in ways which retain its intrinsic worth.

6.3 Future Research Agendas

What is the next step? What future research agendas can be developed from this study? As with most areas, the options are infinite. The application of postmodernist theory to nature is still in its infancy. Along with continued research in this area, further research is

also needed on the power vested in these constructions, their theoretical and historical foundations and the influence of class, race, culture and gender. In addition to this, investigations also need to concentrate on the significance of these constructions. What do they tell us of society's relationship with nature and how it has or has not changed? What is their usefulness in actually bringing a more equitable and 'environmentally friendly' management of nature?

My study has highlighted the difficulties of addressing a fundamentally modernist and environmental debate through a postmodern lens. Gandy (1996) questions the usefulness of postmodernist epistemologies to environmental questions. He argues for the need to "handle the tension between physical reality and the social construction of knowledge without becoming trapped between the competing poles of relativism and rationalism" (Gandy 1996, 30). The ultimate test of postmodernist thought as applied to nature is the result which emerges from its application. Is it going to improve the quality of nature and its treatment? In addition to this evaluation, postmodernist approaches need to be applied in several schools of thought where they have been largely ignored. As Gandy (1996, 31) outlines:

A range of key disciplines which informs environmental policy-making such as civil engineering, biology and environmental economics has scarcely engaged with the critique of positivist science in the 1970s, let alone responded to the poststructuralist epistemological challenges to the creation of knowledge.

This needs to be rectified through the application of postmodernist epistemologies, not to emerge as necessarily the primary theoretical underpinnings of these disciplines, but rather to extract the usefulness and relevance of postmodernist approaches to these areas. It is indeed likely that the application of postmodernist approaches in water resource management may assist conflict, bringing about a 'softer' approach to differing viewpoints.

Why are technocentric approaches predominantly used, both in an environmental management group, such as the MCB and a 'lay group' like the SFRA? While some studies (Kempton and others 1995) have identified an increasing environmental awareness amongst Americans, such equivalent studies are needed for New Zealand. Within my investigation, it has appeared that both within institutional structures and rural

New Zealand, understanding of nature revolves around the 'services' nature may or may not provide to groups and individuals. While some of these values are ostensibly environmentalist, others are primarily anthropocentric and point to a continuing desire to 'conquer nature'. If people are to travel the postmodern road(s), what will postmodern nature be like? How will it be spatially defined? What will be its inherent characteristics? How will the landscape change? These are all questions that will need to be addressed if society is to continue to move in a postmodernist direction.

On a place specific level, there is an urgent need to begin to seriously address local and identifiable environmental problems, which are essential to any global environmental solution. Additional areas of research point to the need to investigate the attachment of nature to place, which in the Foxton Loop conflict was particularly associated with the ideas of local economic development and place identity. How are these place identities important and what implications do they have for the treatment of nature in these localities? There is also scope for further investigation of the constructions of innumerable parts of nature. Questions are also raised as to the meanings of intrinsic nature to different groups of people. What creates differences in these views of nature? On a Manawatu specific level, questions need to be asked as to the responsibility of the organisations which were responsible for looking after the Loop. What equates to an acceptable view of nature for these organisations and how is it reflected in the physical landscape? What rights do local groups such as the SFRA retain? Is there a need for some form of environmental compensation for situations like the Loop conflict?

The scope for further research is extensive in all of the areas which I have developed and explored throughout my thesis. If people are to face the future through environmentally aware eyes, they need a clear focus on the implications of ideas such as postmodernism to ensure the traps of a scientific and rational worldview are not revisited, and that people are aware of any traps that may exist.

6.4 A Final Word

I have used a 'constrained constructivist' approach to argue that nature, while existing as part of a dialectical relationship with people who produce and reproduce its meaning,

still retains an independent agency. The contested domain of the Foxton Loop was represented through separate discourses by the SFRA and MCB. However, while both used a primarily technocentric approach, the power vested in a scientific worldview was sufficient to ensure the Loop will remain in its present condition. This scientific understanding of the value of the Loop exempted the viability of other approaches. I argued the Loop was represented as nature within a modernist technocentric approach. Nature was primarily seen as useable for the varying needs of groups and individuals. Nature's right to exist untouched was removed by people. Ironically, restoration could only occur through similar intervention, where people would rework the landscape to a constructed ideal. To ensure nature is treated appropriately in a postmodern age, it is necessary to both understand the human constructions which create nature, and acknowledge the physicality which underlies this constructed world.

APPENDICES

Appendix 1: Timeline of the Foxton Loop Conflict

1868	Foxton proclaimed port.
Late 1880s	Peak of Foxton Flax Trade. Fifty mills employing 1550 men along the river banks.
1908	Whirokino Cut advocated through Government Commission to investigate flooding and drainage problems in the Lower Manawatu.
1922	Formation of Manawatu Oroua River Board.
1924	MORB adopt major flood control scheme proposal, involving Cut near the present Whirokino Cut.
1926	Modified flood control proposal submitted to the 1926 Manawatu - Oroua River Commission.
1930s	Continued debate and discussion of Whirokino Cut ideas. Reversal to previous suggestions of 1908 Commission. Flax Industry collapses.
Aug 8 1932	Proposal for Whirokino Cut by FBC Town Clerk as a high level diversion. Minutes of meeting indicate Borough's strong support for this action.
Sep 1937	Mr. A.P. Grant releases first major draft for Manawatu Flood Control Scheme. Whirokino Cut is an inherent part of this.
May 1940	Approval of Cabinet for Whirokino Cut works.
August 1940	Final Official Approval from MORB for Whirokino Cut works.
1940(approx.)	Last vessel, the <i>MV Huanui</i> leaves Foxton port.
1942(approx.)	Foxton Port closed.
1941	Soil Conservation and Rivers Control Act. Established Soil Conservation and Rivers Control Council.
June 1941 - 1944	Construction of Whirokino Cut which created Foxton Loop cutoff.
Oct 18 1943	FBC express disappointment over changes to original plans for Whirokino Cut to PWD.
Oct 28 1943	PWD advised FBC that the Loop, following the construction of the Whirokino Cut would become a lagoon.
March 25 1944	Whirokino Cut opened as a result of water breaking through dam blocking water from entering the Cut.
1944 - 1953	Continuing concern over silting of the Cut and loss of amenity expressed by businesses and local Councils.
July 1944	Formation of Manawatu Catchment Board.
Mar 1948	Hon. A.H. Nordmeyer & Hon. F.Hackett acknowledges government responsibility for Loop problems.
Mar 1949	Hon. Robert Semple "admitted the government's responsibility for righting the wrongs".
May 19 1950	Hon. W.S. Goosman promised to honour the assurances of his predecessors.
1950 - 1	Proposal for Lower Manawatu River Control Scheme

	put forward.
Jan 17 1951	SCRCC approve £3 Million River control scheme.
Late 1952	Government approval for Lower Manawatu Scheme.
Jan 28 1953	Largest recorded Manawatu River flood - 4300 cubic metres per second.
April 21-24 1953	Commission of Inquiry into the Effect on Foxton and District of the Construction of the Whirokino Cut in the Manawatu River.
1953	Beginning of construction of Lower Manawatu Scheme.
March 1954	Release of Whirokino Cut Commission of Inquiry Report.
1959 - 1962	Moutoa Floodgates built (approx.)
Oct 1963	Responsibility for all Manawatu River works, including the Whirokino Cut passed to the MCB by the SCRCC.
Dec 1963	Pollution Advisory Council announce 'SC' classification for Foxton Loop waters.
1967	Water and Soil Conservation Act. Established National Water and Soil Conservation Authority.
1975	Formation of Foxton Marina Association which aimed to construct a marina in Foxton area of Manawatu River Loop.
Oct 1985	Public Meeting on the river which lead to the formation of the Save the Foxton River Association. This aimed to reestablish fresh water flow in the river Loop around Foxton.
May 7 1986	Presentation of SFRA petition to Parliament, and submission letters to Government Ministers.
June 18 1986	Initial Submission of SFRA to Government Select Committee re SFRA petition.
August 12 1986	Commission for the Environment submission to IALGSC re SFRA petition.
Sep 16 1986	Ministry of Transport Submission to IALGSC re SFRA petition.
Sep 19 1986	Department of lands & Survey Report to IALGSC re SFRA petition.
Sep 19 1986	Ministry of Agriculture and Fisheries Report to IALGSC re SFRA petition.
Oct 1 1986	Ministry of Works and Development Report to IALGSC re SFRA petition.
Oct 6 1986	Department of Internal Affairs Report to IALGSC re SFRA petition.
Oct 8 1986	Initial Select Committee Hearing held in Foxton Borough Council Chambers.
Oct 9 1986	MCB submission to IALGSC re SFRA petition.
Oct 29 1986	Supplementary Submission of the SFRA to IALGSC re SFRA petition.
Oct 29 1986	Second Select Committee Hearing held in Wellington re SFRA petition.

Oct 29 1986	Petition referred to Government with rider.
Nov 18 1986	Report of Select Committee presented to Parliament.
1987	Formation of Central Districts Catchment Boards combining Manawatu Catchment Board and Rangitikei-Wanganui Catchment Board.
Mar 9 1987	Meeting of all interested parties held into the future of the Foxton River Loop and Foreshore. Called by Annette King, MP for Horowhenua.
June 22 1988	Approval for classification of Foxton Loop and environs as a Regional Reserve received from the Manawatu United Council.
July 1987	Initial \$30 000 Foxton Loop Study proposed.
Sep 1987	Revised \$10 000 Foxton Loop Study proposed.
Aug 1988	Foxton Loop Water Quality Report acknowledging water quality in the Loop was better than that of Lower Manawatu River.
Jan 1989	Foxton Loop Flow Improvement Report released. Recommended a compromise where existing drainage channel is enlarged and culvert replaced, and the building of tidal gates at cost of \$375 000. 'Do nothing' option of report favoured by Ministry for the Environment.
July 27 1989	FBC put forward proposals for consideration of Loop to a team studying Regional Recreational Water Resource Options in the Lower Manawatu.
Nov 1989	Formation of Manawatu-Wanganui Regional Council.
1991	Resource Management Act.
July 1991	SFRA compromises over river action. Decide to 'go it alone'.
June 1993	Establishment of Foxton River Loop Development Working Party by Foxton Community Board. Aimed to achieve "the development of recreation uses within the Foxton River Loop with to beautification and conservation values".

Appendix 2: Conclusions of the Foxton Loop Flow Improvement Report

Source: Central Districts Catchment Boards 1989 Foxton Loop Flow Improvement, Central Districts Catchment Boards Report No. 80, Palmerston North, p. 21.

Conclusions

1. Foxton Loop is a cut-off meander bend near the Manawatu River mouth. Both the Loop and Matararapa Island are affected by river floods of about annual recurrence or greater. Manawatu River flow was diverted in 1944 by Whirokino Cut construction.
2. A Commission of Inquiry in 1953 decided Whirokino Cut retention was necessary for lower Manawatu floodwater discharge. Existing Lower Manawatu Scheme stopbanks (below Shannon), the Moutoa floodway, and various land drainage works were designed to utilize 'enhanced Whirokino Cut floodwater discharge'.
3. Sedimentation and water quality concerns in the Loop have arisen. Sedimentation is a natural process in any cut-off meander bend. However water quality surveys undertaken between July 1987 and June 1988 indicate existing waters within the Loop generally have a higher quality than waters within the Manawatu River below Whirokino.
4. The Soil Conservation and Rivers Control Council (SCRCC) has indicated "compensation" money has been paid to some parties for Whirokino Cut side-effects. The SCRCC disclaimed further responsibilities for the Cut in 1963.

Improved or increased flow through the Loop is not necessary for Lower Manawatu Scheme operation and special works would be necessary for any flow improvement project.

5. Engineering studies indicate a restriction to river flow (through the Whirokino Cut) would be necessary before significant flow re-occurred through the Loop. Any such restriction would create major flood control problems.

Dredging of an enlarged channel between the Loop and the river is possible although expensive. Any enlarged channel would experience on-going sedimentation problems. Sedimentation at the upstream end of the Loop has occurred at about 5, 500 cubic metres per year since 1944.

6. Enhancement of the Foxton Loop environment may be possible by planting and protecting hardy shrubs on Matararapa Island, maintaining a boat access-way in the middle reaches and at the lower end of the Loop, screening the existing refuse tip, and developing the area's wildlife and fisheries values.
7. The Foxton Borough Council could consider enlargement of the existing drainage channel at the upstream end of the Loop, and the need for a new culvert and for tidal gates at the upstream end. The Borough Council may wish to restrict Manawatu River flood flows from the Loop.

Appendix 3: Government Models for Petition and Select Committee documents

This appendix aims to explain the procedures for writing petition and select committee documents. This is important in discourse analysis for identifying the particular social practices which are used in documentary material.

In order to progress through the various parliamentary stages, petitioning must follow certain guidelines (OCHR 1993, McGee 1994). These relate mainly to the format, language and presentation of a petition. According to New Zealand parliamentary practice, petitions must:

- be addressed to the House of Representatives.
- include the request the petitioners are making, known as the 'prayer'.
- be easily readable.
- use temperate and respectful language.
- be brief and accurate, and not contain irrelevant statements.
- be signed by at least one person attending to the formal requirements of the petition.
- not refer to any debate in the House of Representatives.
- be written in English and/or Maori. (OCHR 1993).

The most important component of the petition is the prayer. A petition is invalid without a prayer. The 'prayer' of a petition represents the action the petitioners are requesting of the House. Other conditions which may lead to the non acceptance of a petition are:

- petitions that seek to make changes to the domestic law of a foreign state.
- petitions where subject matter of the petition lies within the Ombudsman's jurisdiction.
- where people have not exhausted their legal remedies.
- where matters in the subject of the petition have been addressed through an earlier petition (McGee 1994).

The required format for a petition is outlined below (see Figure 5). A petition document must be addressed as follows:

“TO THE MEMBERS OF THE HOUSE OF REPRESENTATIVES OF NEW ZEALAND IN PARLIAMENT ASSEMBLED

The petition of [*principal petitioner’s full name/title of corporation*] of [*postal address/postal address of registered office*] and [*number of other signatures*] others.

Respectfully submits:

That...

[*state concisely the subject-matter of, our reasons for, the petition; use a new paragraph for each point made*].

Your Petitioner therefore requests that the House...

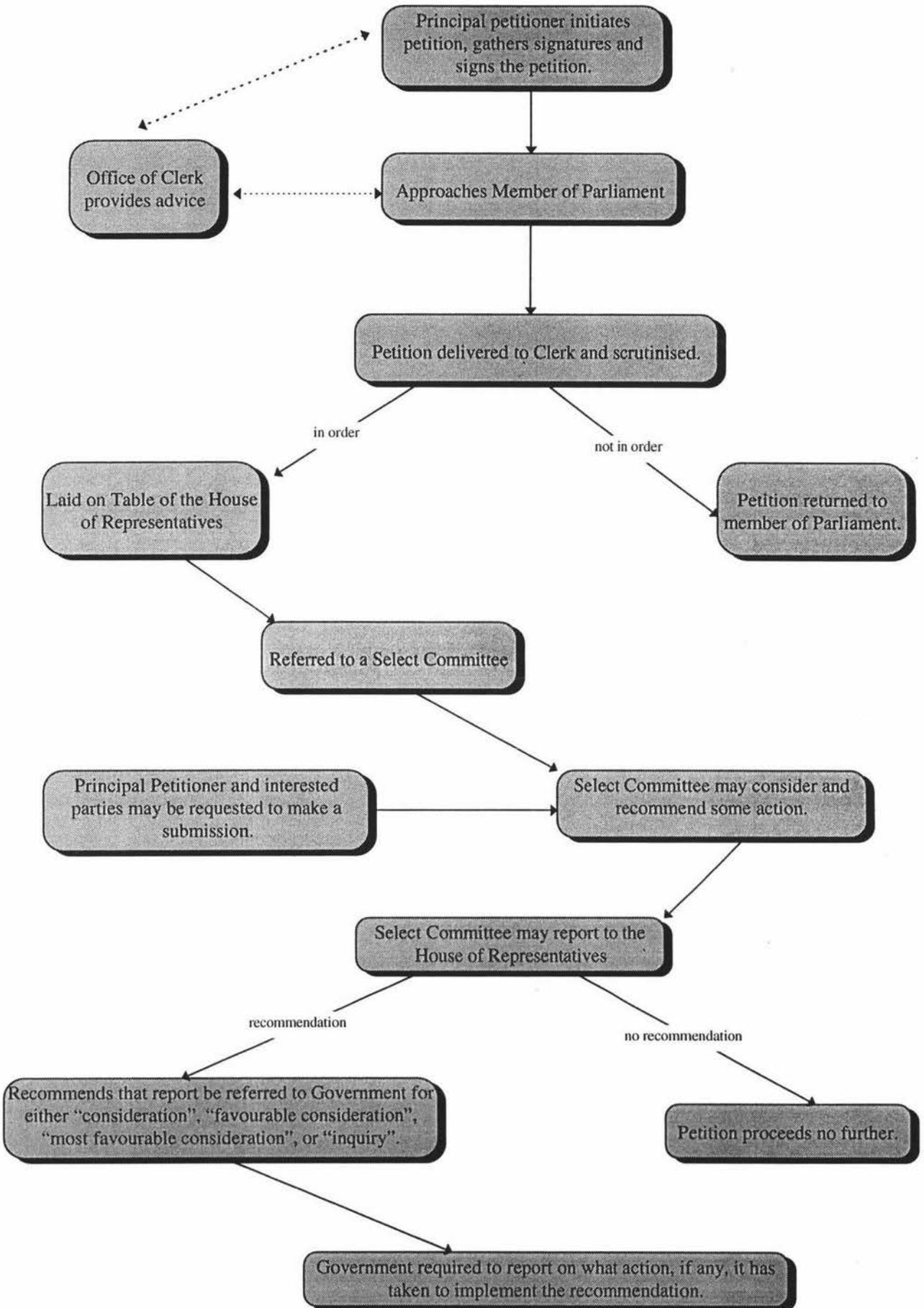
[*this is the “prayer” of the petition - state what particular action or form of relief from the House; the prayer must seek action from the House rather than simply be a protest or a declaration*]

Figure 5: Required Format for a Petition Document

(Source: Office of the Clerk of the House of Representatives 1993 Petitioning the House of Representatives, Wellington: Office of the Clerk of the House of Representatives, p. 4, Original Emphases)

Petitions which meet these criteria are generally referred to a Select Committee. The Select Committee system is a vital cog in the New Zealand parliamentary system, because it allows extended interaction between the public and parliamentarians. Select Committees may hold a hearing(s) into the subject of a petition. At this hearing, the presenters of the petition, along with Government Departments and interested parties may be requested to give a submission. Submissions represent “the presentation of views or opinions, either in written or oral form, on a matter currently under consideration by a Select Committee” (OCHR 1994, 3). Select Committees do not provide a set format for submissions, but they are required to be ordered, clear, easy to read, accurate and complete.

Appendix 4: The Petition Process



Bibliography

- Acheson, A.R. 21/4/1953 *Report to the Whirokino Cut Commission of Inquiry*, Unpublished Manuscript.
- Acheson, A.R. 1968 *River Control and Drainage in New Zealand*, New Zealand: Ministry of Works.
- Anderson, K. 1995 "Culture and Nature at the Adelaide Zoo: at the frontiers of 'human' geography", *Transactions: The Institute of British Geographers NS*, V 20, p. 275-294.
- Anderson, K. and Gale, F. (eds.) 1992 *Inventing Places: Studies in Cultural Geography*, Melbourne: Longman Cheshire.
- Attfield, R. 1983 "Christian attitudes to nature", *Journal of the History of Ideas*, V 44:3, p. 369-86.
- Backstrom, C.H. and Hursh-César, G. 1981 *Survey Research*, 2nd edition, New York: John Wiley and Sons.
- Barnes, T.J. and Duncan, J.S. (eds.) 1992a: *Writing Worlds: Discourse, Text and Metaphor in the Representation of Landscape*, London: Routledge.
- Barnes, T.J. and Duncan, J.S. 1992b: 'Introduction: Writing Worlds', p. 1-17. In *Writing Worlds: Discourse, Text and Metaphor in the Representation of Landscape*. Edited by Barnes, T.J. and Duncan, J.S., London: Routledge.
- Barker, K. (Gen. Ed) 1985 *Holy Bible - New International Version (NIV)*, Michigan: Zondervan Bible Publishers.
- Bash, H.H. 1995 *Social Problems and Social Movements: An exploration into the Sociological Construction of Alternative Realities*, New Jersey: Humanities Press.
- Bayliss-Smith, T. and Owens, S. 1994 "The Environmental Challenge", p. 113-145. In *Human Geography: Society, Space and Social Science*. Edited by Gregory, D., Martin, R., and Smith, G., Basingstoke: Macmillan Press.
- Bell, C. and Roberts, H. (eds.) 1984 *Social Researching: Politics, Problems, Practice*, London: Routledge and Kegan Paul.
- Bennett, R. and Estall, R. (eds.) 1991 *Global Change and Challenge: Geography for the 1990s*, London: Routledge.
- Berg, L.D. 1993 "Between Modernism and Post- Modernism", *Progress in Human Geography*, V 17:4, p. 490-507.
- Berg, L.D. 1994 "Masculinity, Place and a Binary Discourse of 'Theory' and 'Empirical Investigation' in the Human Geography of Aotearoa/ New Zealand", *Gender, Place and Culture*, V 1:2, p. 245 - 260.

- Berg, L.D. and Kearns, R.A. 1996 "Naming as Norming: 'Race', Gender and the Identity Politics of Naming Places in Aotearoa/New Zealand", *Environment and Planning D: Society and Space*, V 14:1, p. 99-122.
- Berger, P. and Luckmann, T. 1966 *The Social Construction of Reality*, Middlesex: Penguin Books.
- Bird, E.A.R. 1987 "The Social Construction of Nature: Theoretical Approaches to the History of Environmental Problems", *Environmental Review*, V 11, p. 255-64.
- Bosselmann, K. 1995 *When Two Worlds Collide: Society and Ecology*, Auckland: RSVP Publishing Company Limited.
- Bowlby, S.R. and Lowe, M.S. 1992 "Environmental and Green Movements", p. 161-174. In *Environmental Issues in the 1990s*. Edited by Mannion, A.M. and Bowlby, S.R., Chichester: John Wiley and Sons Limited.
- Brougham, G.G. and McLennan, N.R. 1986 *An Assessment of Palmerston North City Flood Risks*, Palmerston North: Manawatu Catchment Board and Regional Water Board Report No. 69.
- Burgess, J. 1992 "The Art of Interviewing", p. 207-17. In *The Students Companion to Geography*. Edited by Roger, A., Viles, H., and Goudie, A., Oxford: Blackwell Publishers.
- Burgess, R. (ed.) 1988 *Studies in Qualitative Methodology: Volume 1: Conducting Qualitative Research*, London: Jai Press.
- Burman, E. and Parker, I. (eds.) 1993 *Discourse Analytic Research*, London and New York: Routledge.
- Burr, V. 1995 *An Introduction to Social Constructionism*, London and New York: Routledge.
- Burton, I., Kates, R.W., and White, G.F. 1978 *The Environment as Hazard*, New York: Oxford.
- Bush, G. 1995 *Local Government and Politics in New Zealand*, Auckland: Auckland University Press.
- Central Districts Catchment Boards 1989 *Foxton Loop Flow Improvement*, Palmerston North: Central Districts Catchment Boards Report No 80.
- Central Districts Catchment Boards 17/1/1989 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Central Districts Catchment Boards 3/7/1989 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Central Districts Catchment Boards 3/8/1989 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Clifford, J. 1986 "Introduction: Partial truths", p. 1-26. In *Writing Culture: the Poetics and Politics of Ethnography*. Edited by Clifford, J. and Marcus, G.E., University of California: Berkely.

- Clifford, J. and Marcus, G.E. (eds.), *Writing Culture: the Poetics and Politics of Ethnography*, University of California: Berkely.
- Cloke, P. and Little, J. 1990 *The Rural State*, Oxford: Clarendon Press.
- Cocklin, C. 1989 "The Restructuring of Environmental Administration in New Zealand", *Journal of Environmental Management*, V 28, p. 309-326.
- Cocklin, C. and Furuseth, O. 1994 "Geographical Dimensions of Environmental Restructuring in New Zealand", *The Professional Geographer*, V 46:4, p. 459-67.
- Coleman, F. 15/1/1986 *Letter to L.G. King*, Unpublished Manuscript.
- Commission for the Environment 12/8/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Cosgrove, D. and Daniels, S. (eds.) 1988 *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments*, Cambridge: Cambridge University Press.
- Cosgrove, D. and Petts, G. (eds.) 1990 *Water, Engineering and Landscape: Water control and landscape transformation in the modern period*, London: Belhaven Press.
- Cosgrove, D. 1992 "Orders and a new world: cultural geography 1990-1", *Progress in Human Geography*, V16:2, p. 272-280.
- Dear, M. 1988 "The postmodern challenge: reconstructing human geography", *Transactions: The Institute of British Geographers NS*, V 13, p. 262-74.
- Dear, M. 1994 "State", p. 591-3. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Dear, M. 1995 "Practising Postmodern Geography", *Scottish Geographical Magazine*, V 111:3, p. 179-181.
- Demeritt, D. 1994a "Ecology, Objectivity and Critique in Writings on Nature and Human Societies", *Journal of Historical Geography*, V 20:1, p. 22-37.
- Demeritt, D. 1994b "The Nature of Metaphors in Cultural Geography and Environmental History", *Progress in Human Geography*, V 18:2, p. 163-185.
- Department of Health 16/10/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Department of Internal Affairs 6/10/1986 *Letter to the Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Department of Lands & Survey 19/9/86 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Doughty, R. 1981 "Environmental theology: trends and prospects in Christian thought", *Progress in Human Geography*, V 5:2, p. 234-48.

- Duncan, J. and Ley, D. (eds.) 1992 *Place, Culture, Representation*, London: Routledge.
- Duncan, J.S., and Duncan, N. 1988 "(Re)reading the landscape", *Environment and Planning D: Society and Space*, V 6, p.117-126.
- Duncan, N. and Sharp, J.P. 1993 "Confronting representation(s)", *Environment and Planning D: Society and Space*, V 11, p. 473-486.
- Emel, J. 1994 "Environmentalism", p. 167-68, In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Emel, J. 1994 "Nature", p. 408-409. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Evans, P.G. 1964 "The Lower Manawatu River Control Scheme", *NZ Engineering*, V 19:11, p. 411-20.
- Evernden, N. 1992 *The Social Creation of Nature*, Baltimore: John Hopkins University Press.
- Eyles, J. 1988 "Interpreting the Geographical World: Qualitative Approaches in Geographical Research", p. 1-16. In *Qualitative Methods in Human Geography*. Edited by Eyles, J. and Smith, D.M., Cambridge: Polity Press.
- Eyles, J. and Smith, D.M. (eds.) 1988 *Qualitative Methods in Human Geography*, Cambridge: Polity Press.
- Eyles, J. (ed.) 1988 *Research in Human Geography*, Oxford: Blackwell Publishers.
- Fairclough, N. 1992 *Discourse and Social Change*, Cambridge: Polity Press.
- Fitzsimmons, M. 1989 "The Matter of Nature", *Antipode*, V 21:2, p. 106 -120.
- Foucault, M. 1977 *Discipline and Punish: The Birth of the Prison*, New York: Vintage Books.
- Foucault, M. 1984 "The Order of Discourse", p. 108-138. In *Language and Politics*. Edited by Shapiro, M.J., Oxford: Blackwell.
- Foxton Borough Council 18/10/1943 *Letter to Public Works Department*, Wellington, Unpublished Manuscript.
- Foxton Borough Council 7/12/1965 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.
- Foxton Borough Council 23/10/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Foxton Borough Council 9/3/1987 *Record of Discussion of Meeting on the Foxton River Loop and Foreshore - Its Future*, Unpublished Manuscript.
- Foxton Borough Council 27/7/1987 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.

- Foxton Borough Council 22/9/1987 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.
- Foxton Borough Council 24/4/1989 *Letter to Central Districts Catchment Boards*, Unpublished Manuscript.
- Foxton Borough Council 27/7/1989 *Letter to Central Districts Catchment Boards*, Unpublished Manuscript.
- Foxton River Loop Development Working Party 27/9/1993 *Minutes of the Meeting of 27/9/93*, Unpublished Manuscript.
- Foxton River Loop Development Working Party 18/10/1993 *Minutes of the Meeting of 18/10/93*, Unpublished Manuscript.
- Fraser, R. 7/5/1986 *Petition Letter to the House of Representatives*, Unpublished Manuscript.
- Frawley, K. 1992 "A 'Green' Vision: the Evolution of Australian Environmentalism", p. 215-234. In *Inventing Places: Studies in Cultural Geography*. Edited by Anderson, K. and Gale, F., Melbourne: Longman Cheshire.
- Frenkel, S. 1994 "Old theories? New places? Environmental Determinism and Bioregionalism", *Professional Geographer*, V 46:3, p. 289-295.
- Galvin, R. 1993 *Christ and the Good Earth: An introduction to Ecological Theology*, Orewa: Colcom Press.
- Gandy, M. 1996 "Crumbling Land: the Postmodernity Debate and the Analysis of Environmental Problems", *Progress in Human Geography*, V 20:1, p. 23-40.
- Gergen, K.J. 1985 "The Social Constructionist Movement in Modern Psychology", *American Psychologist*, V 40:2, p. 66-75.
- Gergen, K.J. 1994 *Realities and Relationships: Soundings in Social Construction*, Cambridge, Massachusetts: Harvard University Press.
- Giddens, A. 1985 *The Nation-State and Violence*, Cambridge: Polity Press.
- Glacken, C. 1967 *Traces on the Rhodian Shore, Nature and Culture in Western Thought from Ancient Times to the end of the Eighteenth Century*, Berkely and London: University of California Press.
- Glesne, C. and Peshkin, A. 1992 *Becoming Qualitative Researchers: An Introduction*, New York: Longman.
- Gold, M. 1984 "A History of Nature", p. 12-33. In *Geography Matters! A Reader*. Edited by Massey, D. & Allen, J., Cambridge: Cambridge University Press.
- Gore, A. 1992 *Earth In The Balance: Forging a New Common Purpose*, London: Earthscan Publications Limited.
- Graham, E. 1995 "Postmodernism and the Possibility of a New Human Geography", *Scottish Geographical Magazine*, V 111:3, p. 175-78.

- Gregory, D. 1994 "Discourse", p. 136-7. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Gregory, D., Martin, R., Smith, G. (eds.) 1994 *Human Geography: Society, Space and Social Science*, Basingstoke: Macmillan Press.
- Gregory, D. and Walford, R. (eds.) 1989 *Horizons in Human Geography*, Houndsmill: Macmillan.
- Greider, T. and Garkovich, L. 1994 "Landscapes: The Social Construction of Nature and the Environment", *Rural Sociology*, V 59:1, p. 1-24.
- Greider, T. and Little, R.L. 1988 "Social Action and Social Impacts: Subjective Interpretation of Environmental Change", *Society and Natural Resources*, V 1, p. 45-55.
- Grenz, S.J. 1996 *A Primer on Postmodernism*, Grand Rapids, Michigan: Wm.B. Eerdmans Publishing Company.
- Gruen, L. and Jamieson, D. (eds.) 1994 *Reflecting on Nature: Readings in Environmental Philosophy*, Oxford: Oxford University Press.
- Guerrier, Y., Alexander, N., Chase, J., and O'Brien, M. (eds.) 1995 *Values and the Environment: A Social Science Perspective*, Chichester: John Wiley and Sons.
- Haigh, M.J. 1995 "World Views and Environmental Action: A practical exercise", p. 196-208. In *Values and the Environment: A Social Science Perspective*. Edited by Guerrier, Y., Alexander, N., Chase, J., O'Brien, M., Chichester: John Wiley and Sons.
- Haraway, D.J. 1991 *Simians, Cyborgs and Women: The Reinvention of Nature*, New York: Routledge.
- Harrison, C. and Burgess, J. 1994 "Social Constructions of Nature: a case study of conflicts over the development of Rainham Marshes", *Transactions: the Institute of British Geographers NS*, V 19:3, p. 291-310.
- Hartshorne, R. 1940 "The Concepts of 'Raison d'être' and 'Maturity' of States; Illustrated from the Mid-Danube Area", *Annals of the Association of American Geographers*, V 30, p. 59-60.
- Hartshorne, R. 1950 "The Functional Approach in Political Geography", *Annals of the Association of American Geographers*, V 40, p. 95-130.
- Hayles, N.K. 1995 "Searching for Common Ground", p. 47-63. In *Reinventing Nature? Responses to Postmodern Deconstruction*. Edited by Soulé, M.E. and Lease, G., Washington D.C.: Island Press.
- Healey, M.J. and Rawlinson, M.B. 1993 "Interviewing Business Owners and Managers: Review of Methods and Techniques", *Geoforum*, V 24:3, p. 339-355.
- Healey, P. and Shaw, T. 1994 "Changing Meanings of 'environment' in the British Planning System", *Transactions: The Institute of British Geographers*, V 19:4, p. 425-438.

- Herod, A. 1993 "Gender Issues in the Use of Interviewing as a Research Method", *The Professional Geographer*, V 45:3, p. 305-317.
- Holland, M.K. 1982 *History of the Manawatu River and the Manawatu Catchment Board*, Palmerston North: Manawatu Catchment Board and Regional Water Board Report No 42.
- Hollis, G.E. et.al. 1988 "Wise Use of Wetlands", *Nature and Resources*, V 24:1, p. 2-13.
- Holstein, J.A. and Miller, G. (eds.) 1993 *Reconsidering Social Constructionism*, New York: Aldine de Gruyter.
- Hunt, A.N. (ed.) 1987 *Foxton 1888-1988: The first 100 years*, Foxton Borough Council, Foxton.
- Internal Affairs and Local Government Select Committee 8/10/1986 *Minutes of the Meeting of 8/10/86*, Unpublished Manuscript.
- Internal Affairs and Local Government Select Committee 29/10/1986 *Minutes of the Meeting of 29/10/86*, Unpublished Manuscript.
- Internal Affairs and Local Government Select Committee 18/11/1986 *Abstract of Report to the House of Representatives*, Unpublished Manuscript.
- Jackson, P. 1989 *Maps of Meaning: An Introduction to Cultural Geography*, London: Unwin Hyman.
- Jackson, P. and Penrose, J. (eds.) 1993 *Constructions of Race, Place and Nation*, London: UCL Press.
- Jakobsson, K.M. and Dragun, A.K. 1991 "Water and soil management in New Zealand", *Journal of Environmental Management*, V 33, p. 1-16.
- Jessop, B. 1990 *State Theory: Putting the Capitalist State in its place*, Pennsylvania State University Press, Pennsylvania.
- Job, D. 1995 "Geography with Attitude", *Geography Review*, V6:4, p. 33-7
- Johnston, R.J. 1989 *Environmental Problems: Nature, Society and the State*, London: Belhaven Press.
- Johnston, R.J. 1994 'Power', p. 469-71. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Johnston, R.J., Gregory, D. and Smith, D.M. (eds.) 1994 *The Dictionary of Human Geography*, Third Edition, Oxford: Blackwell Publishers.
- Jones, S. 1985 "Depth interviewing/The Analysis of Depth Interviewing", p. 45-70. In *Applied Qualitative Research*. Edited by Walker, R., London: Gower.
- Keats, D. 1993 *Skilled Interviewing*, 2nd Edition, Australian Council for Educational Research Limited, Victoria: Hawthorn.

- Keith, M. and Pile, S. (eds.) 1993 *Place and the Politics of Identity*, London and New York: Routledge.
- Kelsey, J. 1994 "Aotearoa/New Zealand: The Anatomy of a State in Crisis", p. 178-205. In *Leap into the Dark: The Changing Role of the State in New Zealand since 1984*. Edited by Sharp, A., Auckland: Auckland University Press.
- Kempton, W. and others 1995 *Environmental Values in American Culture*, Cambridge, Massachusetts: MIT Press.
- King, L.G. 4/1/1986 *Letter to F.Coleman*, Unpublished Manuscript.
- Knill, G. 1991 "Towards the Green Paradigm", *South African Geographical Journal*, V 73:2, p. 52-9.
- Lash, S., Szerszynski, B., Wynne, B. (eds.) 1996 *Risk, Environment and Modernity: Towards a New Ecology*, London: Sage Publications.
- Lease, G. 1995 "Introduction: Nature under Fire", p. 3-15. In *Reinventing Nature? Responses to Postmodern Deconstruction*. Edited by Soulé, M.E. and Lease, G., Washington D.C.: Island Press.
- Livingstone, D. 1994 "Environmental Determinism", p. 162-4. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Lovelock, J. 1979 *Gaia - A new look at life on Earth*, Oxford: Oxford University Press.
- Macgill, S.M. 1986 "Environmental Questions and Human Geography", *International Social Science Journal*, V 109, p. 357-376.
- Macnaghten, P. 1993 "Discourses of Nature: argumentation and power", p. 52-72. In *Discourse Analytic Research*. Edited by Burman, E. and Parker, I., London and New York: Routledge.
- Manawatu Catchment Board 14/12/1965 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Manawatu Catchment Board 28/4/1986 *Letter to Save the Foxton River Association*, Unpublished Manuscript.
- Manawatu Catchment Board 4/7/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Manawatu Catchment Board 28/8/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Manawatu Catchment Board 9/10/86 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Manawatu Catchment Board 25/9/1987 *Letter to Foxton Borough Council*, Unpublished Manuscript.

- Manawatu Catchment Board 8/1988 *Report: Aspects of Water Quality in the Foxton Loop and Manawatu River Estuary*, Unpublished Manuscript.
- Manawatu Daily Times 19/10/1950 "Manawatu's Biggest Project", *Manawatu Daily Times*, Palmerston North.
- Manawatu Daily Times 8/12/1950 "The Cost of Flood Protection", *Manawatu Daily Times*, Palmerston North.
- Manawatu Evening Standard 26/3/1986 "River Loop Opening Rejected", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 9/11/1988 "Time running out for Foxton Loop", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 21/2/1989 "Foxton Loop Report calls for compromise", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 17/5/1989 "Board and Council still at odds over re-opening loop", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 22/11/1989 "Widen View Council Told", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 25/11/1989 "River Users Angry over Loop Inaction", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 15/9/1990 "Foxton's Flaxroots", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Evening Standard 8/7/1991 "Foxton Loop Group Compromises", *Manawatu Evening Standard*, Palmerston North.
- Manawatu Herald 17/9/1935 "Moutoa Drainage Board: Monthly Meeting", *Manawatu Herald*, Palmerston North.
- Manawatu - Wanganui Regional Council 1992 *Lower Manawatu Scheme Review and Flood Hazard Mitigation Strategy: Stage 1: Ashhurst to Palmerston North*, Palmerston North: Manawatu - Wanganui Regional Council.
- Manawatu - Wanganui Regional Council 1994 *Proposed Regional Policy Statement for Manawatu-Wanganui*, Palmerston North: Manawatu-Wanganui Regional Council.
- Mannion, A.M. and Bowlby, S.R. "Introduction", p. 3-20. In *Environmental Issues in the 1990s*. Edited by Mannion, A.M. and Bowlby, S.R., Chichester: John Wiley and Sons Limited.
- Mannion, A.M. and Bowlby, S.R. (eds.) 1992 *Environmental Issues in the 1990s*, Chichester: John Wiley and Sons Limited.
- Martin, J. 1994 "The Role of the State in Administration", p. 41-67. In *Leap into the Dark: The Changing Role of the State in New Zealand since 1984*, Edited by Sharp, A., Auckland: Auckland University Press.

- Massey, D. & Allen, J. (eds.) 1984 *Geography Matters! A Reader*, Cambridge: Cambridge University Press.
- Matless, D. 1992 "A modern stream: water, landscape, modernism, and geography" *Environment and Planning D: Society and Space*, V 10:5, p. 569-88.
- Matless, D. 1995 "Culture run riot? Work in social and cultural geography, 1994", *Progress in Human Geography*, V 19:3, p. 395-403
- May, T. 1993 *Social Research: Issues, Methods and Process*, Buckingham: Open University Press.
- McCull, R.H.S. and Ward, J.C. 1987 "The Use of Water Resources", p. 441-459. In *Inland Waters of New Zealand*. Edited by Winer, A.B., Wellington: DSIR Bulletin 241.
- McDowell, L. 1992 "Valid Games? A response to Erica Scoenberger, *The Professional Geographer*, V 44:2, p.212-215.
- McDowell, L. 1994 "The transformation of Cultural Geography", p. 146-73. In *Human Geography: Society, Space and Social Science*. Edited by Gregory, D., Martin, R., and Smith, G., Basingstoke: Macmillan Press.
- McGee, D. 1994 *Parliamentary Practice in New Zealand*, Second Edition, Wellington: GP Publications.
- McLaughlin, A. 1993 *Regarding Nature: Industrialism and Deep Ecology*, Albany, New York: State University of New York Press.
- McLaughlin, A. 1995 "The Heart of Deep Ecology", p. 85-93. In *Deep Ecology for the 21st Century: Readings on the philosophy and practice of the New Environmentalism*. Edited by Sessions, G., Boston: Shambhala Publications Incorporated.
- McLennan, N.R. and O'Connor, E.C. 1985 *A Manawatu River Recreational Management Plan*, Palmerston North: Manawatu Catchment Board and Regional Water Board Report No 67.
- McNeill-Adams, J. 1968 *Effects of the Lower Manawatu River flood control scheme on the farming of the Lower Manawatu*, Thesis, Department of Geography, M.A., Palmerston North: Massey University.
- Metzner, R. 1993 "Emerging Ecological Worldview", *Bucknell University Review*, V37:2, p. 163-172.
- Milne, P. 1993 *The Water Regime: Management of water under the Resource Management Act 1991*, Wellington: Brooker And Friend.
- Minichiello, V., Aroni, R., Timewell, E., and Alexander, L. (eds.) 1995 *In-depth Interviewing: Principles, Techniques, Analysis*, Melbourne: Longman Australia.
- Ministry of Agriculture and Fisheries 19/9/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Ministry for the Environment 27/4/1989 *Letter to Central Districts Catchment Boards*, Unpublished Manuscript.

- Ministry of Transport 16/9/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Ministry of Works & Development 1/10/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Mitchell, D. 1996 "Sticks and Stones: The Work of Landscape (A Reply to Judy Walton's How Realist Can You Get?)", *The Professional Geographer*, V 48:1, p. 94-96.
- Morris, M. and Batten, D. 1988 "Theories of the State: A background paper", p. 1-43. In *The Role of the State: Five perspectives*. Wellington: Royal Commission on Social Policy.
- Moutoa Drainage Board 28/11/1945 *Letter to Public Works Department, Palmerston North*, Unpublished Manuscript.
- Moyser, G. 1988 "Non-Standardised Interviewing in Elite Research", p. 109-136. In *Studies in Qualitative Methodology: Volume 1: Conducting Qualitative Research*. Edited by Burgess, R., London: Jai Press.
- Murphy, R. 1994 *Rationality and Nature: A Sociological Relationship into a Changing Relationship*, Boulder: Westview Press.
- Nevins, T.H.F. 1966 "The Development of River Control Thought in New Zealand", *Soil and Water*, V 3:2, p. 10-13.
- Newnham, W.L. 21/4/1953 *Report to the Whirokino Cut Commission of Inquiry*, Unpublished Manuscript.
- Oakley, A. 1984 "Interviewing Women: A contradiction in terms", p. 30-61. In *Social Researching: Politics, Problems, Practice*. Edited by Bell, C. and Roberts, H., London: Routledge and Kegan Paul.
- O'Brien, M. and Guerrier, Y. 1995 "Values and the Environment: An Introduction", p. xiii-xvii. In *Values and the Environment: A Social Science Perspective*. Edited by Guerrier, Y., Alexander, N., Chase, J. and O'Brien, M., Chichester: John Wiley and Sons.
- Office of the Clerk of the House of Representatives 1993 *Petitioning the House of Representatives*, Wellington: Office of the Clerk of the House of Representatives.
- Office of the Clerk of the House of Representatives 1994 *Making a Submission to a Select Committee*, Wellington: Office of the Clerk of the House of Representatives.
- Opotow, S. and Clayton, S. 1994 "Green Justice: Conceptions of Fairness and the Natural World", *Journal of Social Issues*, V 50:3, p. 1-11.
- O'Riordan, T. 1977 "Environmental Ideologies", *Environment and Planning A*, V 9:1, p. 3-14.
- O'Riordan, T. 1981a "Environmental Issues", *Progress in Human Geography*, V 5, p. 393-407.
- O'Riordan, T. 1981b *Environmentalism*, London: Pion Limited.
- O'Riordan, T. 1984 "Environmental Issues", *Progress in Human Geography*, V 8, p. 392-405.

- O'Riordan, T. 1989 "The Challenge for environmentalism", p. 77-102. In *New Models in geography, Volume 1*. Edited by Peet, R. and Thrift, N., London: Unwin Hyman.
- Owens, S.E. and P.L. 1991 *Environment, Resources and Conservation*, Cambridge: Cambridge University Press.
- Painter, J. 1995 *Politics, Geography and 'Political Geography': A Critical Perspective*, London: Arnold.
- Palmer, G. 1995 *Environment - The International Challenge*, Wellington: Victoria University Press.
- Parker, I. 1990 "Discourse: definitions and contradictions", *Philosophical Psychology*, V 3:2, p. 189-204.
- Pawson, E. 1985 "The Manawatu River: A River Rich in History", *Journal of the New Zealand Jetboat Association*, V 6:1, p. 13-33.
- Peet, R. and Thrift, N. (eds.) 1989 *New Models in geography, Volume 1*, London: Unwin Hyman.
- Pepper, D. 1984 *The Social Roots of Modern Environmentalism*, London: Croom Helm.
- Pepper, D. 1996 *Modern Environmentalism: An Introduction*, London and New York: Routledge.
- Phillips, J. 1987 *A Man's Country: The Image of the Pakeha Male: A history*, Auckland: Penguin Books,.
- Phillips, R.S. 1993 "The language of images in geography", *Progress in Human Geography*, V 17:2, p. 180-94.
- Poole, A.L. 1983 *Catchment Control in New Zealand*, Wellington: New Zealand Ministry of Works and Development Water and Soil Miscellaneous Publication 48.
- Potter, J. and Wetherall, M. 1987 *Discourse and Social Psychology*, London: Sage Publications.
- Powell, J.M. 1993 *The Emergence of Bioregionalism in the Murray - Darling Basin*, Canberra: Murray - Darling River Commission.
- Public Works Department, Palmerston North 28/10/1943 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Rees, J. 1989 "Natural Resources, Economy and Society", p. 364-94. In *Horizons in Human Geography*. Edited by Gregory, D. and Walford, R., Houndsmill: Macmillan.
- Rees, J. 1991 "Resources and the Environment: Scarcity and Sustainability", p. 5-26. In *Global Change and Challenge: Geography for the 1990s*. Edited by Bennett, R. and Estall, R., London: Routledge.
- Robertson - Brown, G. 1986 "The Foxton River Loop on the Manawatu River", *New Zealand Map Society Journal*, No 21, p. 6-9.

- Roche, M. 1994 *Land and Water: Water and Soil Conservation and Central Government in New Zealand 1941-88*, Wellington: Historical Branch, Department of Internal Affairs.
- Roger, A., Viles, H., and Goudie, A. (eds.) 1992 *The Students Companion to Geography*, Oxford: Blackwell Publishers.
- Rolston III, Holmes 1988 "Human Values and Natural Systems", *Society and Natural Resources*, V 1, p. 271-283.
- Royal Commission on Social Policy 1988 *The Role of the State: Five perspectives*, Wellington: Royal Commission on Social Policy.
- Sarbin, T.R. and Kitsuse, J.I. (eds.) 1994 *Constructing the Social*, London: Sage Publications.
- Sarbin, T.R. and Kitsuse, J.I. 1994 "A Prologue to Constructing the Social", p. 1-18. In *Constructing the Social*. Edited by Sarbin, T.R. and Kitsuse, J.I., London: Sage Publications.
- Saunders, B.G.R. 1987 *Manawatu and its Neighbours*, Palmerston North: Massey University.
- Save the Foxton River Association 7/2/1986 *Letter to Foxton Borough Council*, Unpublished Manuscript.
- Save the Foxton River Association 19/2/1986 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.
- Save the Foxton River Association 7/5/1986a *Letter to the Honourable Fraser Coleman, Phil Goff and Koro Wetere*, Unpublished Manuscript.
- Save the Foxton River Association 7/5/1986b *Letter to Minister of Works*, Unpublished Manuscript.
- Save the Foxton River Association 7/5/1986c *Petition to the House of Representatives*, Unpublished Manuscript.
- Save the Foxton River Association 18/6/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Save the Foxton River Association 29/10/1986 *Letter to Internal Affairs and Local Government Select Committee*, Unpublished Manuscript.
- Sayer, A. 1993 "Postmodernist thought in geography: A realist view", *Antipode*, V 25:4, p. 320-44.
- Schoenberger, E. 1991 "The Corporate Interview as a Research Method in Economic Geography", *The Professional Geographer*, V 43:2, p. 180-89.
- Schoenberger, E. 1992 "Self Criticism and Self Awareness in Research: A Reply to Linda McDowell", *The Professional Geographer*, V 44:2, p. 215-218.
- Searle, J.R. 1995 *The Construction of Social Reality*, London: Allen Lane/The Penguin Press.

- Selby, M.J. 1985 *Earth's Changing Surface: An Introduction to Geomorphology*, Oxford Clarendon Press.
- Sessions, G. (ed.) 1995 *Deep Ecology for the 21st Century: Readings on the philosophy and practice of the New Environmentalism*, Boston: Shambhala Publications Incorporated.
- Sessions, G. 1995 "Ecocentrism and the Anthropocentric Detour", p. 156-83. In *Deep Ecology for the 21st Century: Readings on the philosophy and practice of the New Environmentalism*. Edited by Sessions, G., Boston: Shambhala Publications Incorporated.
- Shapiro, M.J. (ed.) 1984 *Language and Politics*, Oxford: Blackwell.
- Sharp, A. (ed.) 1994 *Leap into the Dark: The Changing Role of the State in New Zealand since 1984*, Auckland: Auckland University Press.
- Shield, R. 1991 *Places on the Margin: Alternative Geographies of Modernity*, London: Routledge
- Simmons, I.G. 1990 "Ingredients of a green Geography", *Geography*, V 75:2, p. 98-105.
- Simmons, I.G. 1991 *Earth, Air and Water*, London: Edward Arnold.
- Simmons, I.G. 1993 *Interpreting Nature: Cultural Constructions of the Environment*, London: Routledge.
- Simmons, I.G. 1995 "Green geography: An evolving recipe", *Geography*, V 80:2, p. 139-145.
- Smith, S. 1994 "Interviewing", p. 298. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Smith, S. 1994 "Qualitative Methods", p. 491-93. In *The Dictionary of Human Geography*, Third Edition. Edited by Johnston, R.J., Gregory, D. and Smith, D.M., Oxford: Blackwell Publishers.
- Soil Conservation & Rivers Control Council 13/2/1953 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.
- Soil Conservation & Rivers Control Council 14/10/1963 *Report: Manawatu River: Foxton Loop*, Unpublished Manuscript.
- Soil Conservation & Rivers Control Council 17/10/1963 *Letter to Manawatu Catchment Board*, Unpublished Manuscript.
- Soper, K. 1995 *What is Nature?*, Oxford: Blackwell Publishers.
- Soulé, M.E. 1995 "The Social Siege of Nature", p. 137-170. In *Reinventing Nature? Responses to Postmodern Deconstruction*. Edited by Soulé, M.E. and Lease, G., Washington D.C.: Island Press.
- Soulé, M.E. and Lease, G. (eds.) 1995 *Reinventing Nature? Responses to Postmodern Deconstruction*, Washington D.C.: Island Press.

- Spaargaren, G. and Mol, A.P.J. 1992 "Sociology, Environment and Modernity: Ecological Modernization as a Theory of Social Change", *Society and Natural Resources*, V 5, p. 323-344.
- Steinbach, J. 1995 'River-Related Tourism in Europe - An Overview', *GeoJournal*, V 35:4, p. 443-458.
- Stratford, E. 1995 "Gender and Environment: some preliminary questions about women and water in the South Australian context", *Gender, Place and Culture*, V 2:2, p. 209-215.
- Szerszynski, B. and others 1996 "Introduction: Ecology, Realism and the Social Sciences", p. 1-26. In *Risk, Environment and Modernity: Towards a New Ecology*. Edited by Lash, S., Szerszynski, B. and Wynne, B., London: Sage Publications.
- Thomas, K. 1983 *Man and the Natural World*, London: Allen Lane.
- Van Dijk, T.A. 1988 *News as Discourse*, New Jersey: Lawrence Erlbaum Associates Inc. Publishers.
- Walker, R. (ed.) 1985 *Applied Qualitative Research*, London: Gower.
- Wetherall, M. and Potter, J. 1992 *Mapping the language of Racism: Discourse and the Legitimation of Exploitation*, New York: Harvester Wheatsheaf.
- Whatmore, S. and Boucher, S. 1993 "Bargaining with Nature: the discourse and practice of 'environmental planning gain' ", *Transactions: the Institute of British Geographers*, V 18:2, p. 166-78.
- Whirokino Cut Commission of Inquiry 25/8/1953 *Report of the Whirokino Cut Commission*, Unpublished Manuscript.
- White, L. 1967 "The Historical Roots of Our Ecologic Crisis", *Science*, V 155: 3767, p. 1203 - 1207.
- Wilson, A. 1992 *The Culture of Nature*, Massachusetts: Blackwell Publishers.
- Wilson, D. 1996 "Metaphors, Growth Coalition Discourses and Black Poverty Neighbourhoods in a US city", *Antipode*, V 28:1, p. 72-96.
- Winer, A.B. (ed.) 1987 *Inland Waters of New Zealand*, Wellington: DSIR Bulletin 241.
- Worster, D. 1990 "Transformations of the Earth: Toward an Agroecological perspective in History", *The Journal of American History*, V 76, p. 1087- 1110.
- Yeatman, A. 1994 "State and Community", p. 206-224. In *Leap into the Dark: The Changing Role of the State in New Zealand since 1984*. Edited by Sharp, A., Auckland: Auckland University Press.