Te Ihu Waka

The Interface between Research and Māori Development

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He Mihi

'Ko Aotea taku waka

Ko Tipuahororangi te tatā

Te hoe ko Kautu-ki-te-Rangi

Nga tai e, Riwaru...'[1]

Tēnei au he uri nō Ngaruahine, Tāngahoe, Pakakohi, Ngāti Ruanui me Taranaki, e mihi nei.

Kei ngā kaihoe o ngā waka maha o te Ao Māori, tēnā koutou. Ko te tūmanako ka whakamāmā tēnei kaupapa a te *Ihu Waka* i ngā take maha kei mua i a tātou, kia tae ki ngā pae tawhiti i wawatatia e rātou mā kua mene ki te pō.

Tēnā tātou katoa,

Will Edwards

[1] From the waiata *Ko Aotea* of the South Taranaki – Wanganui region.

ABSTRACT

It is widely accepted that traditional Māori research was based on Māori methodologies, philosophies and world-views. Since first contact with Europeans, Māori have been the focus of a substantial amount of research that has spanned time and crossed research disciplines from early anthropological and linguistic studies to the sociological, cultural and scientific research of today. In recent times Māori have asserted that research undertaken in New Zealand should be more cognisant of Māori research and development aspirations and of a Māori world-view.

The current study aimed to create an instrument to assess the contribution research activities undertaken in the contemporary New Zealand research, science and technology (RS&T) sector could make to Māori development. An important output of the study has been the development of a framework, *Te Ihu Waka*. The framework is based on traditional Māori concepts, is compatible with Māori world-views, and is relevant to the contemporary RS&T environment.

Te Ihu Waka is located at the interface between Māori aspirations and the contemporary New Zealand RS&T sector. While this study found Māori goals for research are not always adequately met by current arrangements in New Zealand's RS&T sector, it was concluded that there is potential for progress if tools to negotiate the interface between Māori aspirations and research are available.

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Kāti ake, e tātou mā, kia kī ake au i konei, 'Te ihu waka, te ihu whenua!'

PREFACE

In this thesis I have drawn on various forms of Māori oral and written literature to capture the essence of each chapter. Where possible (and appropriate) I have drawn on literature from my home district in South Taranaki. This has enabled me to draw on two distinct bodies of knowledge that are an integral part of my life: that which I have come to know while presently studying in the Western science paradigm of the University; and the body of literature which is connected to my past, present and future, mātauranga Māori from Taranaki.

I acknowledge that using whakataukī, whakatauākī, karakia, waiata and other forms of Māori literature at the beginning of each chapter is not a novel approach. However, I have attempted to innovate by employing a single metaphor; the waka voyage, for all of the chapters and indeed the title of the study and its resultant framework *Te Ihu Waka.*

This thesis is about research and Māori development. The title *Te Ihu Waka* is a play on the whakataukī 'He ihu waka, he ihu whenua' (see Chapter Six) where the waka has reached its destination. There are obvious parallels between the research process and a waka voyage. *Te Ihu Waka* has connotations of leadership and coordination, the ihu of the waka is where the crew is marshalled. Both require a robust process of identifying a goal, and a course of action to achieve that destination.

Once research and voyaging have reached an endpoint, new journeys and new discoveries are always on the horizon. The completion of one journey is the beginning of another. Our quest for new knowledge and enlightenment has no end point.

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LIST OF ABBREVIATIONS

CCMAU	Crown Company Monitoring Advisory Unit
CFRT	Crown Forestry Rental Trust
CRIs	Crown Research Institutes
DSIR	Department of Scientific and Industrial Research
EEC	European Economic Community
FRST	Foundation for Science Research and Technology
HRC	Health Research Council
ICT	Information and communication technology
ITAG	Information Technology Advisory Group
MAF	Ministry of Agriculture and Fisheries
MoRST	Ministry of Research, Science and Technology
NAMMSAT	National Association of Māori Mathematicians Scientists and Technologists
NRAC	National Research Advisory Council
OTS	Office of Treaty Settlements
R&D	Research and Development
RS&T	Research, Science and Technology
SIAC	Science and Innovation Advisory Council

SoE	State Owned Enterprise
SoI	Statement of Intent
SPO	Strategic Portfolio Outline
TEAC	Tertiary Education Advisory Commission
UK	United Kingdom
USA	United States of America
VIF	Venture Investment Fund
WWII	World War Two

CHAPTER ONE

INTRODUCTION

'Manini waka! Hi!

Tere waka! Hi!...[2]

Introduction

Since first contact with Europeans, Māori have been the focus of a substantial amount of research. This has spanned time and crossed research disciplines, from early anthropological and linguistic studies to present day sociological, cultural and scientific research.

The motivations for carrying out the considerable body of research involving Māori are numerous. Very often the progression of a particular academic discipline or the career advancement of the researcher(s) involved were the primary motivational factors. Other research was carried out for commercial gain by private enterprise. And occasionally, research was undertaken primarily to benefit Māori.

Over the last three decades increased emphasis by the Crown and Māori on the Treaty of Waitangi has led to the emergence of two major bodies of research involving Māori. First, research to substantiate claims to the Waitangi Tribunal for the settlement of historical grievances; second, research to analyse and address the social and economic disparities between Māori and the rest of the New Zealand population.

Increasingly, Māori and other writers have been concerned about the interface between researchers and those being researched: the investigators and the participants. These concerns have been expressed in a variety of fora (see Durie, 1996; Royal, 1993; Soutar, 1996; Stokes, 1985; Tuhiwai-Smith, 1999) and were echoed at *Te Oru Rangahau*, a conference on Māori Research and Development held at Massey University in 1998. Major concerns have included: the ethics of research; methodological debate; intellectual property rights; the 'power dynamics' between the researcher and the researched; growing a research workforce; and the benefits that accrue to Māori as a result of their involvement in research.

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[2] 'Let the waka slide freely! Yes! Let the waka glide speedily! Yes!' An excerpt from the waiata *Manini waka* it is used to energise paddlers, particularly at the beginning of the journey.

This vast body of research has been critiqued over the years in terms of most of the issues identified above. However, to date little work has been done to develop a means to assess the benefits that accrue to Māori as a result of research specifically intended to benefit Māori (Māori specific research). The current study aims to foster discussion in this area.

Rationale for the Study

A study aimed at developing a means to assess the potential benefits that accrue to Māori through involvement in research is important for three reasons.

First, *Te Oru Rangahau* provided an opportunity for Māori researchers to reflect on the many issues concerning research that involved Māori. One of the major themes of the Conference was identified as the relationship between research and Māori development. This study seeks to address that facet, in part at least, by further exploring how research can promote Māori development.

Second, the dual worldwide trends of globalisation and the emergence of the global knowledge society have far-reaching implications for the relationship between Māori development and research. In the emerging global knowledge society of increased homogeneity and familiarity, knowledge and cultural resources that are unique, original and 'exotic' are highly sought after. There is a heightened awareness of the value of indigenous knowledge. Added to this is the research involved in the revitalisation of threatened languages and traditional knowledge that is led by indigenous people themselves.

The third reason the current study is important is that Māori specific research is likely to increase in the future. This increase will be due to a combination of demographic trends, Government policy, a greater Māori need for research to inform their own policy-making coupled with a stronger Māori research capacity, and increasing Māori confidence in evidence-based policy formulation at tribal and community levels.

According to demographic projections, the Māori population is increasing and by 2051 will account for 21 percent of the total New Zealand population (Statistics New Zealand, 2002). It will therefore be incumbent on both the public and private sectors in New Zealand to take Māori perspectives, aspirations and realities into account, since Māori will be a significant part of New Zealand's population.

Current Government policies also encourage a greater Māori participation in research and research-related activities. Besides the Government's response to the global knowledge society, policies aimed at reducing disparities between Māori and non-Māori (formerly officially referred to as 'closing the gaps') still prevail. These policies require research to benchmark and then measure progress (Te Puni Kōkiri, 1998). In this sense, there is a need for empirical evidence so that outcomes of Government policy pertaining to Māori development can be demonstrated. However, addressing disparities is only one aspect of Māori development and, because it hinges on a deficit approach, may not be the most useful avenue for research that will lead to positive development.

Significantly, the Government has signalled an increased commitment to research involving Māori. The Ministry of Research, Science and Technology (MoRST) identified 'Māori Development' as a high-level target outcome for its funding of research, science and technology (RS&T) (MoRST, 1999a). Further, the Government's principal purchaser of research, the Foundation for Research, Science and Technology (FRST), has included 'Māori Development and Advancement' as one of its five major groupings of research portfolios (FRST, undated). Similarly, the Health Research Council of New Zealand (HRC) has established a Māori committee and allocated specific funds to promote Māori research into Māori health (HRC, 1998).

As they expand their roles as service providers and purchasers, Māori themselves will increasingly require evidence-based policies and practices. An increased Māori research capacity has also emerged in recent years as a result of several initiatives, among them the Māori research workforce development programme of the HRC. Finally, and perhaps most significantly, as Māori themselves enter the global knowledge society in the post-Treaty of Waitangi settlement era, research that generates marketable goods and services will be significantly important.

Thesis Overview

This thesis is divided into seven chapters. Chapter One, 'Introduction', highlights the key concerns Māori have voiced about research, and provides a rationale for the study and a brief synopsis of each chapter. It identifies the major forces that give shape to the Māori development – research interface.

Chapter Two, 'Methodology', states the aim of the thesis, identifies the central research question, the outputs and the intended outcomes of the study. A commentary of past research involving Māori provides historical context, and the scope for the study is then defined. The last section of this chapter explains how the research was carried out and describes the way in which a kaupapa Māori approach was employed.

Chapter Three, 'Māori and Development', begins by exploring the meaning of the term 'development', and then provides an analysis of development studies theory. The emergence and evolution of Māori development to the present day is then described. This is followed by a commentary on the emerging body of Māori development theory. The chapter concludes with the presentation and analysis of Māori development themes.

Chapter Four is titled 'Māori and the Contemporary Research, Science and Technology Sector'. This chapter details the historical underpinnings of New Zealand's RS&T sector from its genesis through the major restructuring in the 1980s and '90s to the present. Māori interaction with the RS&T sector is analysed by examining Māori aspirations for research and Māori-specific initiatives by research policy makers, purchasers and providers.

Chapter Five, 'Survey Findings', reports on the findings from the qualitative survey of experts. The discussion of the findings is framed around the key areas of enquiry from the survey questionnaire. The key themes that emerged for each area of enquiry are identified and are complemented with quotes from the survey interviewees.

Chapter Six is 'A Framework to Assess the Contribution of Research to Māori Development'. This chapter begins with a critical analysis of existing mechanisms to assess the contribution research makes to Māori development. Drawing on the observations and analyses from the literature and the findings from the survey, the *Te Ihu Waka* Framework is presented and discussed. The application of *Te Ihu Waka* to New Zealand's RS&T sector is then described. *Te Ihu Waka* is then applied to an actual Māori specific research project to assess that project's contribution to Māori development, and to trial the use of the Framework. The chapter concludes with a discussion on potential indicators for the Framework and the Framework's location at the interface between Māori and the RS&T sector.

Chapter Seven, 'Conclusions', briefly reviews the study and then discusses the implications of the Framework. Finally, the study concludes that *Te Ihu Waka* is located at the interface

between Māori and the RS&T sector, and the Framework can be used to enhance the relationship between the two.

CHAPTER TWO

METHODOLOGY

'...kia tika te hoe mai o te waka nei,

kei pariparingia te tai

ka monenehu te kura!'[3]

Introduction

This chapter describes the methodological base for this thesis. First, it discusses what the study intends to achieve by identifying the research aim, research question, research outputs, and intended outcomes. Second, the historical context of research as it relates to Māori people is examined. The historical context leads into the third section, which discusses the scope of the study. The final section of this Chapter documents how the current study was undertaken.

What this study intends to achieve

The overall aim of the current study is: *To develop a framework to assess the contribution a research activity can make to Māori development.*

The central research question for this study is: *How can the contribution of research to Māori development be assessed?*

The study has two main outputs. First, it has been undertaken to fulfil the requirements for a Masters of Philosophy thesis. Second, it will provide a tool that can be used in the planning stages of research or after research has been completed, to gauge the benefits that accrue from a given research activity.

As Māori groups are presented with proposals to participate in research or contemplate instigating their own research activity, it is difficult to measure the potential benefit of that

[3] 'Paddle correctly lest the feather adornments become wet and indistinct from sea spray'. This is an excerpt from the contemporary waiata *Haruru ana*, that extols the value of following an appropriate method in order to complete the task at hand. This waiata was composed by Phylis Luke of Ngaruahine.

research in terms of Māori development. The intention of the current study is to produce a framework that can be used by Māori organisations to assess the likely contribution research can make to Māori development. Underlying the project is the fundamental question 'what is Māori development?'; and this will be addressed in Chapter 3.

Crown research purchasers are obliged to fund research programmes that will benefit Māori (MoRST, 1999a). Inevitably, these funders have limited resources. Prioritising research proposals for funding is therefore common practice. This study provides a tool that might help Crown research purchasers evaluate the potential contribution of proposed studies to Māori development.

In addition to its use before research has been undertaken, the framework will also be useful as a retrospective tool to allow those involved in research to assess the success of past projects and to identify areas for improvement for future research.

The current study intends to contribute towards two primary outcomes. First, it is hoped the study will help ensure time, energy and available funds are expended on that research most likely to contribute positively to Māori development in terms of individual well-being and the retention of a strong cultural identity, and research that will add value to the Māori resource base. At present, Māori are over represented in most negative socio-economic indicators in New Zealand. Much research has been and continues to be undertaken to remedy this situation, and realising the full benefit from this research effort is imperative. Second, it is anticipated that this thesis will enhance understanding of the interface between Māori development aspirations and research activities in New Zealand's RS&T sector.

This study does not intend to provide an in-depth historical investigation into past research involving Māori; rather it is about contemporary research. That said, it is useful to provide first a historical context to research involving Māori.

The evolution of research as it relates to Māori

There is a saying among Māori that they are 'the most researched people in the world'. Although this sentiment may not be entirely accurate it is a comment on Māori perceptions of the amount of research that has been carried out on Māori. This position is reflected in the comments of Māori academic Ngahuia Te Awekotuku "every day, every year, some aspect of the Māori world is being researched" (Te Awekotuku, 1991, p. 13).

Māori customary approaches

Māori have undertaken research in one form or another for centuries though not necessarily using western scientific methods. It is widely accepted that Māori traditionally carried out research according to their own methodologies, philosophies and worldview (Cunningham, 1999a). Michael Walker (1997) asserts that before leaving central Polynesia, the earliest Māori must have had a systematically organised knowledge of their world to discover distant islands, 1500 years before European explorers first deliberately ventured out of sight of their own land.

The often-cited first account of Māori research endeavour is that of Tāne-nui-a-rangi ascending into the heavens to attain knowledge (see Buck, 1977). In this narrative Tāne, one of the offspring of the primal parents Ranginui (sky) and Papatuanuku (earth), ascended to the twelfth 'universe' to gain knowledge for humanity. The knowledge was contained in three baskets, te kete tuauri (basket of ancient knowledge), te kete tuatea (basket of ancestral knowledge), and te kete aronui (basket of sacred knowledge). Tuhiwai-Smith (1999) highlights two significant points from this narrative. First, Tane-nui-a-rangi sought knowledge on behalf of others. Second, the knowledge he gained was differentiated into three separate categories.

The traditional Māori approach to knowledge is that the good of the collective is paramount. To a large extent this philosophy reflected a pre-occupation with tribal survival, and the sentiment is retained in modern times even though individualisation is now well established in many spheres. However, despite the emphasis on collective good being derived from research, not all knowledge was available to all people. Consistent with the differentiation of knowledge into the three kete, some forms of knowledge were available to all, while access to specialised knowledge was highly restricted. Mead (1996, p. 183) states:

> Knowledge was...highly specialised, but each aspect was essential to the well-being of the whole whānau and iwi. It was also perceived as hierarchical. There was knowledge that all people needed to carry out their daily activities...there was also knowledge that...was bestowed only on those who had demonstrated a gift or skill in this area and who had shown readiness to receive and respect such knowledge.

The restricted types of knowledge were transmitted, retained and developed through the customary Māori learning institution of the whare wānanga, or higher school of learning.

Intellectual leadership was provided by tohunga, specialists who were trained in various matters of concern to Māori society. For example, tohunga held specialist knowledge in relation to seafaring, plant life, marine life, bird life, warfare, genealogy, health, tribal histories, architecture, geography, and, metaphysical phenomena. Selection for training as tohunga usually required the appropriate genealogy and personal capabilities (Buck, 1977). Students of whare wānanga were held accountable to the wider group, and strict protocols and restrictions were enforced therein.

There were, perhaps, two reasons for restrictions on specialist types of knowledge. First, due to the tribal nature of traditional Māori society, strategic types of knowledge would compromise the collective if it was to fall in to the hands of hostile parties. Second, due to the oral, non-literate nature of (pre-European) Māori society, the reliance on accurate oral transmission and mental retention of restricted knowledge was of critical importance to the well-being of Māori collectives. Not everyone could be trusted to transmit knowledge accurately.

The traditional Māori approach to knowledge and research emerged from the context of Māori cosmology and social structures – a traditional Māori worldview that had developed over the ages and had served Māori well, particularly in understanding the natural environment and constructing social and economic paradigms.

Māori as objects of research

Arrival of Europeans

The earliest examples of research of Māori by non-Māori occurred when European people first arrived in Aotearoa. Those aboard the first British ship, the *Endeavour,* were in fact on a voyage motivated by scientific discovery; their purpose was to observe the transit of Venus to make more accurate the measurement of time (Tuhiwai-Smith, 1999). Therefore it is of little surprise that Joseph Banks keenly recorded initial observations of Māori in the interests of science. However, this 'encounter' style of research, where superficial observations were analysed from within the researcher's own world-view, dominated the approach taken for decades if not centuries. The Māori world was interpreted by employing the norms of Western investigators.

Tuhiwai-Smith is highly critical of the legacy left by the early researchers or 'adventurers'. These 'travellers tales' had a great influence on the way indigenous people were and continue

to be perceived by non-indigenous populations, and even by indigenous groups themselves. The "...fanciful, ill-informed opinions or explanations of indigenous life..." through informal systems of collecting and disseminating information led to the biases and judgements of the adventurer becoming constituted and institutionalised (Tuhiwai-Smith, 1999, p. 79). As a result, "...many of these early travellers' views are now taken for granted as facts...." and are seen as more authoritative than the oral histories of Māori themselves (Tuhiwai-Smith, 1999, p. 79).

European Ethnographers

Around 100 years after the initial observations of the adventurer-type researchers came those researchers who made more in-depth studies into Māori society and culture. These researchers lived within Māori communities, often for long periods of time. Elsdon Best, for example, used many of the conventions now associated with social science (Tuhiwai-Smith, 1999). In a similar way to the early adventurer researchers, the observations of Best, Smith, Houston and others have become the 'master narrative'. In common with their earlier counterparts, Best's and Smith's writings also became constituted, and accepted as the perceived wisdom (Tuhiwai-Smith, 1999).

Tuhiwai-Smith (1999) recounts that the New Zealand Institute was established in 1867; and the first scholarly research journal for the publication of research on Māori was the *Transactions and Proceedings of the New Zealand Institute,* which preceded the launch of the Polynesian Society in 1892. While much of the work of Best, Smith and their contemporaries remains a rich source of information for both non-Māori and Māori seeking understanding of traditional Māori society and culture, it has acted as the lens of the looking glass through which the majority of the present generations examine Māori tradition (Byrnes, 1990; Walker, 1992). A similar phenomenon is the homogenisation of tribal histories or the "national norm of Māori history and traditions" (Royal, 1993, p. 13).

Modern Western Approaches

In order to better understand modern Western approaches to research as they relate to Māori, it is useful briefly to consider commonalities and differences between customary Māori and Western approaches.

At a practical level there are a number of similarities between customary Māori and non-Māori research approaches. For example, both approaches emphasise the clear articulation of research questions, a range of research methods, the systematic collection of data by

trained specialists, and the generation of new knowledge. A key difference, however, is the approach to knowledge. In customary Māori society knowledge was often considered to have originated from metaphysical realms, whereas the position of Western academics was that knowledge originates from the efforts of people. However, this distinction might be more apparent than real since much Māori knowledge resulted from observation over generations, from trial and error, and from innovation based on the application of established methods to novel situations. As previously discussed, knowledge for Māori was not universally accessible and for some categories of knowledge access was highly restricted to trained specialists. In a society that relied on oral tradition, and in the context of competitive survival pressures, this ensured knowledge integrity was maintained in its transmission and knowledge about survival was safeguarded to maintain competitive advantage. In contrast, the Western position was that all people have an inherent right to knowledge and therefore in theory at least knowledge was universally available. This was not, however, necessarily reflected in practice, as historically access to universities and other professional learning institutions was limited to those of higher social class, and in any event a series of gate-keeping exercises served to restrict knowledge, except among equals.

From a Māori perspective, knowledge content is integrated. For example, knowledge relating to spirituality and the environment are intimately linked. Western approaches, however, tend toward the compartmentalisation of knowledge according to disciplines and sectors where imposed boundaries de-emphasise linkages. According to Māori commentators, this disciplinary bias threatens the integrity of Māori knowledge (Durie, 1996).

Other differences between customary Māori and Western approaches to knowledge relate to benefits and accountability. From a Māori perspective, the benefits of knowledge generation should accrue at the level of the collective – a predictable position in an environment where the survival of the individual is inextricably linked to the well-being of the collective. Traditional Western approaches placed a far greater emphasis on gain from knowledge generation at an individual level. This approach is reflected today in the emphasis placed on individual academic's publication records and position as first author. Individual's status and position within the academic community is directly linked to individual publication record, and the benefits of research activity accrue at the individual level. In terms of accountability, Māori individual knowledge specialists were accountable to the collective for their activities. Transgression of knowledge-related protocols could have very serious repercussions from the community. Such strict knowledge controls and therefore accountabilities were not apparent

in Western society due to differences in conceptions of knowledge (i.e. metaphysical versus human knowledge sources, restricted versus unrestricted access to knowledge). Where there was accountability, it was usually limited to a body of academic or professional peers rather than the wider community (see Table 1 below).

Table 1 Comparison of customary Māori and Western approaches to knowledge

	Customary Māori Approach	**Western Approach**
Source of Knowledge	Metaphysical realm, observation, trial and error	Inquiry
Access to knowledge	Restricted in some cases	Unrestricted. Inherent right to knowledge, though access to institutions of knowledge restricted
Categorisation of knowledge	Holistic view of knowledge	Disciplinary focus
Focus	Integration	Analysis
Beneficiary of knowledge	Collective	Individual
Accountability	Collective	Peers, designated authorities

These historical differences and similarities in conceptualising knowledge continue to be expressed in modern-day tensions between Māori and Western research approaches. Māori have voiced a variety of concerns about Western approaches to research involving Māori. A central underlying concern is that research based firmly within Western paradigms does not take account of unique Māori world-views. Therefore, Western research interprets Māori experience through a monocultural lens that is ill adapted to elucidate knowledge relevant to Māori and therefore of benefit to Māori. Other Māori concerns with Western approaches are that they have not led to improved outcomes for Māori, that there have been limited Māori participation (except as research subjects) and rare opportunities for any degree of Māori control, and that research has been carried out in ways that are at odds with Māori cultural processes. Despite these concerns, many of the methods developed and utilised in Western enquiry paradigms can be adapted to ensure either consistency with Māori

preferences or, as a minimum, that they do not offend Māori cultural sensitivities. There are, however, methods that will not be appropriate for research among Māori generally or in certain contexts.

Contemporary mainstream academic institutions have begun to recognise the need to adapt Western approaches when researching Māori and when Māori are research participants. This is reflected in the funding criteria and processes of major Government research funding institutions. For example, the Foundation for Research Science and Technology and the Health Research Council of New Zealand, two key Government research funders, have adopted application processes that require research teams to describe the ways in which their research is relevant to Māori, and will contribute to Māori research capacity-building. While not receiving universal praise, these types of requirements have led to an increased inclusion of Māori in research teams, and in some instances the adaptation of research approaches to better suit Māori preferences.

Re-emergence of Māori approaches to research

Māori dissatisfaction with Western research approaches has led to the re-emergence of distinctly Māori approaches to research. These Māori approaches to research draw heavily on customary concepts of knowledge and understanding. The use of customary approaches to knowledge and research in modern times and indeed for the future is an important consideration for Māori. Henare (1988) notes, "Continual learning and the attainment of skills for life were fundamental to past Māori as indeed they are now" (p. 27).

Scope of the Study

In understanding contemporary Māori approaches to research, Cunningham's (1999a) taxonomy offers considerable illumination. It divides research, science and technology into four categories based on the degree of Māori involvement and control. The taxonomy is used as the primary reference point for this study.

Te Ihu Waka deals with Māori specific research, that is, research that involves Māori as participants, either as part of a research team or as the main research respondents, whether or not Māori or other parties instigate the research. For the purposes of the current Study 'Māori specific research' consists of the three latter categories identified in Cunningham's taxonomy: 'research involving Māori'; 'Māori centred research'; and 'kaupapa Māori research' (see Table 2 below). Māori specific research is posited in a continuum between conventional

scientific approaches and research that rests on Māori knowledge systems. While Māori specific research aims to benefit Māori in a deliberate and focussed way, it should be noted that all research has the potential to be of some benefit to Māori people.

The taxonomy was chosen as a reference point because it provides a concise yet robust means to delineate the approaches to research that underpin this study. Added to this, Cunningham (1999a) states that the taxonomy is useful when considering the likely contribution of research to Māori development as it locates researchers, research projects, methods and methodologies.

The main limitation of the taxonomy is that it is focussed on publicly funded research undertaken in New Zealand. As such the taxonomy makes two omissions. First it does not explicitly address the possibility of collaborative research between Māori and international organisations. Second it does not allow for the possibility of privately funded Māori specific research. The current study addresses the taxonomy's limitation in two ways. First, this study assumes that international organisations can be seen as mainstream within Cunningham's taxonomy. Second, the current study focuses on publicly funded research, particularly research funded through Vote RS&T (as will be noted in Chapter Four, the total amount of privately funded research undertaken in New Zealand is very low).

Table 2 A taxonomy for Māori research

	Research Not Involving Māori	**Research Involving Māori**	**Māori-Centred Research**	**Kaupapa Māori Research**
Description	Research where Māori participation or data is neither sought nor considered relevant; research whose results are thought to have no impact on Māori	Research where Māori are involved as participants or subjects, or possibly as junior members of a research team; research where Māori data are sought and analysed; Research where Māori may be trained in contemporary research methods and mainstream analysis.	Research where Māori are significant participants, and are typically senior members of research teams; research where a Māori analysis is undertaken and which produces Māori knowledge, albeit measured against mainstream standards for research.	Research where Māori are significant participants, and where the research team are typically all Māori; research where a Māori analysis is undertaken and which produces Māori knowledge; research that primarily meets expectations and quality standards set by Māori.
Examples	Quantum chemistry; clinical trail, volcanology	Analysis of ethnic differentials in disease rates; genetic study of familial cancer	Longitudinal social science study of Māori households	Traditional study of cosmology; study of cultural determinants of health
Control	Mainstream	Mainstream	Mainstream	Māori
Māori Participation	Nil	Minor	Major	Major-possibly exclusive
		←	Māori Specific Research	→

Adapted from Cunningham (1999a, p. 391)

(The shaded area identifies the current study's interpretation of Māori specific research)

How the study was undertaken

Research paradigm

A paradigm is a world-view or set of basic beliefs (Guba & Lincoln, 1994; Patton, 1990). Basic assumptions about the nature of reality provide a framework for interpreting the world that makes explicit what is important, legitimate, and reasonable, and therefore guides the researcher's practice (Patton, 1990).

It is the paradigm that defines acceptable methodologies, research priorities, conceptualisation of problems, appropriate methods (Phillips, 1987), and the standards by which the quality of research is assessed (Ratima, 2001). However, providing a more precise and universally accepted definition of a paradigm is difficult, as "it is of the nature of a paradigm to belie precise definition. Nevertheless it is possible to describe some of the typical components that go to make up a paradigm." (Chalmers, 1982, p. 91).

The two key components of a paradigm are ontology and epistemology. Davidson and Tolich (1999, p. 26) contend that a paradigm can be seen "as a collection of ontological and epistemological assumptions". Ontology is "an inventory of the kinds of thing[s] that do, or can, exist in the world." Therefore, 'What things are in the world?' is a question of ontology. Epistemology, on the other hand, is "the philosophical theory of knowledge. The branch of philosophy that deals with how we know what we know." So 'How can we know certain things?' and 'What counts as legitimate knowledge of those things?' are questions of epistemology (Davidson & Tolich, 1999, pp. 23–26).

Tomlins-Jahnke (1996) maintains that a Māori ontological and epistemological perspective has validity and legitimacy since it is based on a world-view that continues to exist and is experienced by real people. Graham Smith (1997) makes similar assumptions. The current study ignores neither the wider literature, nor the relevance of international findings but was undertaken from a Māori ontological and epistemological position – a 'kaupapa Māori' research approach was employed.

A kaupapa Māori approach

Emergence of kaupapa Māori

The term 'kaupapa Māori' has been used with increased frequency in many contexts over the last 15 to 20 years. Bishop and Glynn (1999) state that it emerged from the ethnic

revitalisation movement that occurred in New Zealand following the rapid urbanisation of Māori after World War II. During the 1970s' 'years of turmoil', of increased Māori resistance to State and major culture domination (Walker, 1978), the political discourse of kaupapa Māori blossomed (Bishop & Glynn, 1999).

Much of the debate surrounding kaupapa Māori has been about how it applies to education (see Bishop 1996; Bishop & Glynn, 1999; Johnston, 1999; Smith, G., 1997; Smith, L., 1991; Tomlins-Jahnke, 1996; Tuhiwai-Smith, 1999). However, Graham Smith (1997) and others have noted that kaupapa Māori theory could be used in other 'crisis' areas. Linda Tuhiwai-Smith (1999) and Marewa Glover (2002) have focussed on establishing kaupapa Māori as a basis for research.

Basic definition of kaupapa Māori

Kaupapa Māori emerged and continues to be legitimated from within the Māori community (Bishop, 1996). And it is the Māori community that defines kaupapa Māori. It is essentially a type of research based on 'Māori philosophy and principles' (Bishop & Glynn, 1999). Two academics who have spearheaded the articulation of kaupapa Māori, Linda Tuhiwai-Smith and Graham Smith, provide more detail.[4] Linda Smith (1995, cited in Tomlins-Jahnke, 1996) describes kaupapa Māori research as research over which Māori maintain conceptual, design, methodological and interpretative control; that is, "...research by Māori, for Māori, with Māori" (p. 29). Graham Smith asserts kaupapa Māori research is:

> related to being Māori, is connected to Māori philosophy and principles, takes for granted the validity and legitimacy of Māori, the importance of Māori language and culture, and is concerned with the struggle for autonomy over our own cultural well-being (cited in Tuhiwai-Smith, 1999, p. 185).

Key elements of kaupapa Māori

Kaupapa Māori is still formative, and as such is not yet a fully-fledged theory (Cunningham, 1999a; Tuhiwai-Smith, 1999). More recently, Kingi (2002) has begun to develop a kaupapa Māori ontology and a kaupapa Māori epistemology. However, despite the absence of a robust theoretical base, some key tenets can be identified. Three tenets with particular relevance to the current study are discussed below: whānau and kaupapa Māori research; the

[4] Linda Tuhiwai-Smith has written under other names including: Linda Mead, Linda Smith and Linda Tuhiwai.

role of non-Māori in kaupapa Māori research; and kaupapa Māori as intervention and resistance.

Whānau and kaupapa Māori research

It has been generally accepted that whānau is an important facet of undertaking kaupapa Māori research (Bishop, 1996; Bishop, 1999; Bishop Glynn, 1999; Smith, G., 1995; Smith, G., 1997; Tuhiwai-Smith, 1999). The use of the term whānau in this context differs from the common understanding of whānau as the extended family related through whakapapa or genealogy. Instead, the whānau is a 'kaupapa-based' or purpose-based 'family' that relates through a shared purpose (Bishop, 1994; Metge, 1990; Metge, 1995; Ratima, 1996), in this case, a research project. Tuhiwai-Smith (1999, p. 185) reports that "Bishop refers to this as a 'research *whānau* of interest' [and] Irwin refers to a '*whānau* of supervisors'". The key roles of this kaupapa-based whānau are as both a supervisory structure and an organisational structure for handling research. Some research projects specifically form research whānau consisting of members of the Māori community, often from the researcher's own extended family, to provide cultural expertise and an accountability mechanism directly to the Māori community.

The current study utilised a research whānau. Researchers from the School of Māori Studies at Massey University were involved in both the primary and secondary supervisory roles. And the wider research community within the School was involved in peer-review activities. The methodology for this study was presented to and critiqued by the research whānau of the School. In other words, the School personnel provided the community from which a research whānau emerged.

The role of non-Māori in kaupapa Māori research.

There is general consensus that Māori should have a central role in kaupapa Māori research. However, there is on-going debate regarding the roles and responsibilities of non-Māori. A common phrase used to describe kaupapa Māori is 'by Māori, for Māori, with Māori'. This implies that non-Māori cannot be involved with kaupapa Māori research. Several writers have countered by arguing for 'space' to be allowed for non-Māori participation. For example, by using the Treaty of Waitangi as a framework Bishop (cited in Tuhiwai-Smith, 1999, p. 184) "argues that non-indigenous people, generally speaking, have an obligation to support Māori research (as Treaty partners)." Smith (1997) pragmatically recognises the value of the mentoring and advocacy role non-Māori researchers can play in supporting kaupapa Māori research.

In terms of the current study, the researcher and principal supervisor are Māori. While the secondary supervisor is not of Māori descent, both the mentoring and advocacy roles discussed by Bishop and others were fulfilled.

Kaupapa Māori as intervention and resistance

The precursors to Kaupapa Māori research began to emerge in the 1960s and 1970s (Bishop & Glynn, 1999). This tumultuous period in New Zealand history is widely perceived as an era of Māori protest and resistance to State and major-culture domination.

Given this historical context, it is not surprising that when parallels are drawn between kaupapa Māori and critical theory, the notions of critique, protest, resistance, and emancipation are discussed (Tuhiwai-Smith, 1999).[5] Graham Smith (1997), however, suggests that kaupapa Māori is not only concerned with theory but is indeed an 'intervention praxis', a way of improving an unfavourable situation for Māori. When commenting on the unfavourable education system, Smith (1997, p. 27) states that:

> Kaupapa Māori theory and praxis...evolved out of Māori communities as a deliberate means to comprehend, resist and transform the crises related to the dual concerns of schooling underachievement of Māori students and the ongoing erosion of Māori language, knowledge and culture ...

As previously mentioned, a substantial amount of research concerning Māori has been carried out over the years. Much of that research did not lead to positive outcomes for Māori. The current study aims to contribute towards addressing this unfavourable situation by producing a framework that can assess the benefits of Māori involvement in research, and facilitate research that produces positive outcomes for Māori.

Selection of research methods

When carrying out research, regardless of the research paradigm, the use of a combination of research methods rather than any single method will add considerable robustness to the research exercise. Bouma (2000, p. 182) asserts, "It is often better to use several data-gathering techniques to answer a research question. Using a variety of techniques may provide different perspectives...".

[5] For further discussion of kaupapa Māori in relation to critical theory see Pihama, 1993; Walsh-Tapiata, 1997; Smith, G., 1997.

In a similar vein, Denzin (cited in Patton, 1990, p. 187) states "no single method ever adequately solves the problem of rival casual factors....Because each method reveals different aspects of empirical reality, multiple methods of observations must be employed."

It was therefore decided that a combination of research methods rather than any single method would be used to inform the present study.

Selecting an appropriate set of research methods is a pertinent issue for any research exercise. Tuhiwai-Smith (1999, p. 173) argues that "Research methodology is based on the skill of matching the problem with an 'appropriate' set of investigative strategies. It is concerned with ensuring that information is accessed in such a way as to guarantee validity and reliability."

In deeming what is 'appropriate', Davidson and Tolich (1999, p. 21) simply contend that

> ...the question about what method[s] we should use in any particular research task depends on the theory [paradigm] involved, the questions being asked, the people they are being asked of, and – the reality principle – the amount of time and money available to complete the research.

Patton (1990) identifies a set of questions to guide the selection of methods that touch upon: the intended audience of the information generated; the type of information needed; when the information is required; and the availability of resources.

Drawing on these notions, the selection criteria used for the research methods were: compatibility with the research paradigm; ability to contribute towards answering the research question; and adherence to resource constraints.

Compatibility with the research paradigm

As noted earlier, it is the research paradigm that defines acceptable methods. A wide selection of research methods is available to the contemporary social science researcher. However, some of these may not be compatible with the kaupapa Māori research approach of the current study. The research methods considered required that cultural dimensions be taken into account. Tuhiwai-Smith (1999, p.15) states "Indigenous methodologies tend to approach cultural protocols, values and behaviours as an integral part of methodology."

For example, it was not considered appropriate to carry out a postal or telephone survey with research participants. The practice of kanohi ki te kanohi (face-to-face) interaction is central to Māori culture. This facilitates a much fuller and culturally complete interaction between the interviewer and interviewee beyond merely the exchange of questions and responses. The kanohi ki te kanohi approach makes a reciprocal relationship more central to the exercise.

Ability to contribute towards addressing the research question

With the research question defined in the early stages of the current study, all energies were then focussed on addressing that question. Carefully contemplating whether a research method could contribute in a systematic way to answering the research question was beneficial. Moreover, care was taken to avoid methods that were not of *direct* relevance to the central research question.

A historical analysis of research undertaken on Māori since the arrival of Pākehā was contemplated for the current study. While being a potentially useful data source, with some bearing on the present study, it was regarded as both overly ambitious, and not sufficiently focussed to enable the characteristics of Māori specific research – and the actual contribution made by research to Māori development – to be identified.

Resource constraints

This study was carried out to fulfil the requirements for a Masters of Philosophy thesis in Māori Studies. A review of Masterate level theses from similar academic disciplines and advice from academic supervisors provided guidance into this matter. This led to eliminating the possibility of holding hui of research participants and stakeholders. Despite the aforementioned selection criteria it was possible to select from a number of research methods.

Research methods employed

Two primary research methods that satisfied the selection criteria were employed to address the central research question of this study: a literature review and a qualitative survey of experts.

The literature review was undertaken first, and informed the general areas of inquiry for the qualitative survey of experts. The literature review and the findings from the survey were then used to determine the elements of the Framework.

Literature review

The literature review is one of the fundamental tools of western research; so much so that it is largely taken for granted in research exercises. Its function is to make the researcher aware of what is already known, what questions are current in the field, and what research approaches have been tried and with what results (Bouma, 2000).

An extensive literature search was undertaken to inform this study. The Massey University library and other New Zealand universities' libraries accessed through on-line catalogues were a major source of books, reports, theses and journal articles. Databases that were searched for literature included Index New Zealand, Arts and Humanities Citation Index, Educational Resources Information Centre (ERIC), Wilson Social Sciences Abstracts, and Wilson Humanities Abstracts.

A number of World Wide Web search engines such as Google (www.google.com); Hotbot (www.hotbot.com); and Yahoo (www.yahoo.com) were also used. These search engines produced links to many useful World Wide Web sites and pages that provided up-to-date data.

Once relevant literature had been identified and accessed, it was read and annotated. Key ideas and quotes were entered into a word processing application. The literature review involved identification and categorisation of key themes. The thematic analysis of the literature provided: background information both to contextualise and guide the research; direction for areas of inquiry for the qualitative survey of experts; and reconfirmation of data subsequently gathered through interviews. The literature also provided a data source from which key themes were identified to complement the data drawn from the interviews.

Qualitative survey of experts

The second research method employed involved a qualitative survey of experts. It was considered that a survey of individuals with considerable expertise and experience of research involving Māori would be an essential source of data.

Sample selection

It has been frequently suggested that attaining a meaningful random sample of any Māori population can be difficult (Fitzgerald, Durie, Black, Durie, A., Christensen & Taiapa, 1996). The current study used a non-random, purposeful sampling strategy. While not justifying generalisations, Patton (1990, p. 169) notes that the strength of purposeful sampling lies in

selecting information-rich cases for study from which "one can learn a great deal about issues of central importance to the purpose of the research." In particular, mixed purposeful sampling was used. The purpose of this type of sample is to ensure that multiple perspectives are attained (Patton, 1990).

Four individuals were interviewed for the survey, all of Māori descent and from different sectors of the Māori research community: a full time researcher within a Crown Research Institute; a member of the governing body of a major research purchaser within New Zealand; a rural community-based Māori researcher; and a Māori health programme developer involved in numerous research projects. The research participants were recruited through professional and Māori community networks.

Interviews

The current study used standardised open-ended interviews. This technique uses a questionnaire that is deliberately worded and ordered to take each respondent through the same questions, using essentially the same words in the same sequence (Patton, 1990).

Interviews carried out in this way are highly focussed and ensure respondent's time is carefully used (Patton, 1990). The importance placed on effectively using the respondent's time made the standardised open-ended interview an attractive choice. It is also acknowledged that standardised open-ended interviewing makes data analysis somewhat more straightforward as it is relatively easy to locate each respondent's response to the same question (Patton, 1990).

The major drawback of using standardised open-ended interviews is that it does not allow the interviewer to pursue topics or issues that arise but were not anticipated when the questionnaire was written (Patton, 1990). However, compensation was made at the end of each interview when the participant was given the opportunity to make any additional comments considered relevant (Ratima, 2001).

The main areas of inquiry, identified during the literature review, formed the main thematic areas of the questionnaire (see Appendix 1). The questionnaire was piloted with an individual who had considerable experience in the field of Māori research, and much in common with the research participants who were eventually interviewed. Amendments were made to the questionnaire as a result of the piloting process.

Data obtained from the interviews were recorded in writing on the questionnaire and by audio tape. Immediately after the interview, the researcher wrote a record of the interview based on notes taken during the interview and the audio recording. Bouma (2000, p. 181), when discussing in-depth interviewing, states "A 'write-up' based on notes as long as it is done immediately after the event, can provide a very reliable record...". To improve the quality of the data, a transcript was generated from the audiotape recorded during the interviews.

Data analysis

The data gleaned from the interviews were analysed using content analysis. Content analysis is described by Patton (1990, p. 381) as "the process of identifying, coding, and categorizing the primary patterns of data." From the field notes collected, the subsequent interview write up, and the tape transcripts, the main topics emerging from the interviews were classified. Once classification of the main topics had taken place, the central themes from the interviews could be distilled.

Error Management

Triangulation was the main approach used to ensure errors were minimized in the survey. Patton (1990, p. 187) describes triangulation as "the combination of methodologies in the study of the same phenomena..." He goes on to state, "It is possible to achieve triangulation within a qualitative inquiry strategy by combining different kinds of qualitative methods, mixing purposeful samples, and including multiple perspectives" (1990, p. 188).

Triangulation was employed at three levels within the current study. First and most obviously was using both the review of literature and conducting the survey – a combination of qualitative methods. Second was the mixed purposeful sampling employed for the survey, where a variety of perspectives were surveyed. Third was the use of notes taken during the interview in conjunction with transcripts from the interviews.

Another key method of error minimisation was to adhere strictly to the convention of writing notes immediately after interviews, as previously noted Bouma (2000).

Ethical issues

The current study was approved by Massey University's ethics committee. To gain the Committee's approval several important ethical issues were addressed in the design and undertaking of the survey. These included accessing participants in a suitable manner, gaining informed consent from participants before interviews (see Appendix 2) including

stating there was no compulsion for their participation, and safeguarding participants' confidentiality through separation and secure storage of documents linking the participants to the completed interview questionnaire. The transcriber who was employed during the study was required to sign a confidentiality agreement, stating that no information would be discussed with anyone except the principal investigator.

Māori cultural expectations

This study was carried out using a kaupapa Māori approach. As such, certain Māori process issues needed to be taken into account during the design and completion of the survey. For example, koha (gifts) of food were given to the participants, and interviews were always carried out at a time and place identified by the participant. At the completion of the study, a copy of the thesis was also presented in person to each participant, and the results of the research and their implications were discussed with them. The return of the completed thesis was in keeping with the reciprocal nature of the kanohi ki te kanohi Māori interaction documented earlier.

Summary

This thesis is premised on the concern that a great deal of research involving Māori has been carried out without a clear understanding of how that research benefits Māori. The aim of this study is to 'develop a framework to assess the contribution a research activity can make to Māori development.' The central research question is 'how can the contribution research makes to Māori development be assessed?'

Māori are not unfamiliar with research and on contact with Europeans became the 'subjects of research'. More recently Māori have asserted the right to participate in and conduct research on their own terms. The current study focuses on Māori specific research undertaken in the publicly funded RS&T sector. A kaupapa Māori approach was used to address the research aims and research question. The main research methods utilised were a literature review and a qualitative survey of Māori research experts.

CHAPTER THREE

MĀORI AND DEVELOPMENT

'Kaua e rangiruatia te hāpai o te hoe; e kore tō tātou waka e ū ki uta'[6]

Introduction

The current study is concerned with the links between Māori development and research. It is therefore important to clarify the meaning of 'development', particularly as it relates to Māori. This chapter defines development and provides an overview of the main tenets of development studies theory. The emergence and evolution of Māori development is also discussed. A brief commentary of Māori Development theory is presented, and then, drawing on the development studies and Māori development literature, a number of Māori development themes relevant to the current study are presented.

What is 'Development'?

The term 'development' has a variety of meanings that are often implied, as opposed to specifically defined (Cunningham, 1999b). However, a range of specialised definitions of development has been proposed across a variety of disciplines including economics, education, medicine and science.

In the field of sociology, Hoogvelt (1978, pp. 5-6) offers a working definition of development as:

> ... a process of induced economic growth and change in an internationally stratified world. This definition contains three focal elements....Development as Process: that is as an evolutionary process of growth and change of man's [sic] social and cultural organisation....Development as Interaction: that is as a process of growth and change of societies under conditions of interaction with other societies....Development as Action: that is as a consciously planned and monitored process of growth and change.

[6] "Do not lift the paddle out of unison or our canoe will never reach the shore." This whakatauakī states working together is critical to succeed in any joint project (Mead and Grove, 2001, p. 193).

In general, development has connotations of growth, evolution and change. A common assumption is that this growth, evolution or change is desirable, positive and deliberate.

Development Theory

Development emerged as an academic discipline in the years immediately after World War II (Worsley, 1984). At that time, many impoverished countries were emerging from colonial rule. Britain and its WWII allies were withdrawing from colonies, often due to the depletion of their economic resources in the war effort. Much political and academic debate took place on how these newly independent countries could go about establishing themselves.

The two superpowers of the mid- to late-Twentieth Century, the United States of America and Russia, in their struggle for global ascendancy were eager to influence the political and economic alignment of the newly independent countries or 'Third World' (Overton, 1997a). According to Estiva, the birth of development as a distinctive discipline can be traced to the inaugural speech made by President Truman of the USA in 1949. During this speech Truman coined the term 'underdeveloped' (Estiva, 1992).

In general, development theory endeavours to explain the world, its inequalities, and the relationships between different countries and societies. It also offers explanations for the changes that these relationships cause in the countries and for people involved.

Different development theories prescribe distinct courses for achieving development (Overton, 1997a). Historically, Development Studies has grouped its explanations and prescribed courses to attain development according to two main schools of thought or paradigms – modernisation and underdevelopment. A third paradigm that began to be articulated in the 1970s is of particular relevance to the present study. It is a group of theories including alternative development, post development and indigenous development.

The West, including the USA, embraced the modernisation paradigm and the East, including the Soviet Union, subscribed to the tenets of underdevelopment. The struggle for ascendancy between these two contrasting paradigms and those that subscribed to them, known as the Cold War, provided the backdrop for the evolution of development theory. Key milestones of the Cold War were mirrored by trends in the evolution of development theory (McMichael, 1996).

Modernisation

The modernisation paradigm draws on a wide range of academic disciplines including sociology, economics, political science and geography (Mason, 1997; Overton, 1997a; Webster, 1990). In particular, the modernisation theory expanded on the economic development theories of the 1950s and 1960s, incorporating a focus on social and cultural factors. Major theoretical influences on modernisation theory came from sociology. Social Darwinism was concerned with the notion of progressive societal change from 'primitive' to 'advanced'. Webster (1990) identifies two key theorists, Durkeim (1858–1917) and Weber (1864–1920), as influential in terms of the sociological underpinnings of modernisation theory. According to Durkheim, (cited in Webster, 1990) societies can be classified on a continuum from 'traditional' to 'modern'. This distinction provides the foundation for ideal-typical modernisation theory (Overton, 1997a). Western industrialised 'developed' societies are considered as the benchmark, while 'traditional' societies are deemed to be in need of development. Weber took a different approach, focussing on the characteristics of individuals within a given society that were predisposed towards modernisation. Weber also explored the spread of these characteristics within a society. Weber's work is an example of socio-psychological theory (Overton, 1997a).

Based on classical economics, Rostow's take-off theory was a milestone in the modernisation paradigm. Published in 1956, this theory proved to be hugely influential in development circles and in the policy of Western governments. Rostow used the industrial revolution of England (and other Western nations) as a model for 'non-developed' countries to emulate (Mason, 1997; Webster, 1990). He identified a series of related conditions needed to achieve 'take-off'. These were: a rise in the rate of productive investment; the emergence of one or more substantial manufacturing sectors; and the existence or rapid emergence of political, social and institutional frameworks (Rostow, 1956).

Rostow also identified five development stages through which societies go to move from a 'traditional' to 'modern' society. He rationalised that if the non-developed countries moved through those stages they would experience similar development outcomes to 'modern' societies (Mason, 1997; Overton, 1997a; Rapley, 1996; Rostow, 1956). Another key tenet of modernisation theory is that if countries are unable to follow the development patterns of the West (such as achieving the conditions for Rostow's take-off), it is due to internal factors such as socio-economic and cultural systems (Webster, 1990; Worsley, 1984).

In short, modernisation theory focuses on the transition of societies from 'traditional' to 'modern', that is, towards Western ideals that are considered to be the gold standard for development. The pathway to development is characterised by such values as individualism, universality, urbanisation, social reorganisation, and profit maximisation (Overton, 1997a). Further, it is postulated that failure to achieve development goals is due to internal factors.

Not surprisingly, modernisation theory has been criticised as top-down, Euro-centric and assimilatory in nature (Brohman, 1995; Puketapu, 2000; Young, 1995). The failure of modernisation theory to take into account external influences on development progress has also been criticised, as has the assumption that all societies could or should emulate the experience of Western society (Brohman, 1995). A further concern that has much relevance to indigenous peoples is that development has not historically benefited all people equally, and development for some has been at the expense of others (Young, 1995). Most damning from an indigenous peoples' perspective, however, is the notion that a prerequisite to development is the adoption of Western cultural systems in preference to indigenous models. Therefore, from an indigenous peoples' perspective, modernisation theory is fundamentally flawed.

These criticisms have endured, leading to the undermining of modernisation theory. However, more recently neo-liberalism has seen a revival of many of the principles underlying modernisation theory.

Underdevelopment

Underdevelopment theory is based on the 19th century ideas of Marx (1818–1883) and Lenin (1870–1924) (Webster, 1990), and focuses on the reasons why the Third World is underdeveloped, and on the responsible external forces (Overton, 1997a).

Marx's theory on capitalism and class conflict provides a foundation for underdevelopment theory. The class conflict theory describes how the dominant class (the wealthy) own and control the means of production and thereby exploit the subordinate working class by appropriating surplus value generated by their labour (Webster, 1990). Lenin extended the concept of capitalism in his discussion of imperialism. He viewed imperialism as a form of capitalist expansion, and linked Third World impoverishment with Western capitalist expansion. Just as employers exploited employees, so too did colonial powers exploit their colonies (Overton, 1997a).

Also influential was the work of the United Nations' Economic Commission for Latin America, which explored structural issues. Essentially, structuralism proposed that differences between the West and Third World countries meant Western economic theories were not relevant to developing countries. The centre-periphery model developed by the Commission positioned Western industrialised countries at the centre, and Third World countries at the periphery. A basic tenet of the model was that benefits of trade were distributed disproportionately to the centre, and that free trade served to exacerbate the disparity (Frank, 1967).

Central to underdevelopment theory is the notion of a dialectical relationship (or a two-way causal connection) between the development of the First World and the underdevelopment of the Third World. This asserts that the West developed precisely because it underdeveloped the Third World, whilst conversely the Third World became underdeveloped in helping the ascendancy of the West (Hoogvelt, 1978). This is perpetuated by a global system of exchange that is driven by capitalism, fundamental to which are inequalities between the centre and the periphery. Underdevelopment theory is a critique of modernisation and capitalism, and instead proposes co-operative initiatives between like nations and increased self-sufficiency.

Criticisms of underdevelopment theory have tended to focus on its opposition to capitalism; that is, there is scope for development within a capitalist system and that foreign investment has potential benefits for countries (Corbridge, 1986; Ray, 1973; Sloan, 1977). While there has been criticism that underdevelopment theory ignores cultural and social factors (Forbes, 1984), it has also been suggested it may have relevance to the position of indigenous peoples within countries (Young, 1995).

The opposing positions of modernisation theory and underdevelopment theory resulted in a theoretical impasse and disillusionment with these dominant paradigms. In turn, this led to the emergence of other approaches that tended to fall into one of two categories – alternative development or postdevelopment.

Alternative development

Until the 1970s, development projects in the Third World were typically large in scope and capital intensive (Lipton, 1977). Many strategies were based on modernisation theory and emphasised a country's improved overall economic growth and the 'trickle down' effect of development (Overton, 1997b). Both the Modernisation and Marxist paradigms favoured

development through industrialisation, and were therefore biased towards urban dwellers (Overton, 1997b), and tended to be less effective in targeting the most needy – society's poor and powerless (Lipton, 1977).

The problems of early development projects were symptomatic of the general approach to development. Those who were supposedly being developed were largely excluded from the project cycle. Instead the cycle, comprised of identification of needs, design of project, implementation and evaluation, was dominated by the donor agency (Overton, 1997b). The top-down approach often caused much frustration for development practitioners, as the target communities (or those who were supposedly being assisted) understandably showed little interest or support for projects. Consequently, many practitioners have reassessed their methods and philosophies of development, which has given rise to alternative development.

Alternative development is often referred to as an emerging development paradigm, though it may be better thought of as a collection of theories that focus less on profit and production and more on people and the environment (Friedmann, 1992). The types of principles underlying alternative development are equity, sustainability, participation, diversity, relevance (Overton, 1997b), and empowerment. Empowerment is particularly important and is considered the central tenet of alternative development (Brohman, 1996; Chambers, 1997; Friedmann, 1992). For this reason, it is worth discussing the empowerment construct in some detail.

Empowerment

The academic roots of empowerment are located within community psychology, feminism, education and sociology (Alinsky, 1972; Freire, 1988; Gutierrez, 1990; Rappaport, 1987). While there is no consensus as to the exact meaning of empowerment, a commonly quoted definition by Rappaport (1987, p. 122) is "...a process...by which people, organizations, and communities gain mastery over their affairs."

Keiser (1997), in defining empowerment as it relates to minority groups proposed the following definition:

> Empowerment is a process by which a minority group or representatives of that minority group gain a greater ability to influence political outcomes in favor of the minority group. [Empowerment] can be measured by analyzing the minority group's success in capturing important offices, instituting policies that are high on the group's agenda and meet resistance from established groups, [and] securing miscellaneous benefits that other groups also desire (p. 85).

In discussing the meaning of empowerment for black Americans, Green and Wilson (1989) comment that:

> We envisage black empowerment not as an attempt by black to monopolize or exploit power but rather as a process through which they will come to share power alongside other groups and partake as equal partners in decision making (p. xii).

Schuftan (1996) defines empowerment as:

> ...a continuous process that enables people to understand, upgrade and use their capacity to better control and gain power over their own lives. It provides people with choices and the ability to choose, as well as to gain more control over resources they need to improve their condition (p. 260).

Empowerment has been most clearly articulated in development studies literature in the work of Friedmann. According to Friedmann (1992), empowerment relies on genuine participation of people in social and political actions, and has a central concern for capacity building and the redistribution of power in favour of the disenfranchised. Friedmann identifies three interacting levels of power – psychological, social, and political. Psychological power is described as "...an individual sense of potency. Where present, it is demonstrated in self-confident behaviour" (p. 33). Social power relies on capacity building and access to resources such as "...information, knowledge and skills, participation in social organizations, and financial resources" (p. 33). Political power is concerned with access to decision-making processes, usually through collective mechanisms such as political associations or social movements.

Friedmann therefore conceptualises empowerment as a multi-level construct; he also notes that interaction between levels is mediated by social or political action. Similarly, Zimmerman (2000) argues that empowerment is a multi-level construct and identifies those

levels as individual, organisational and community. Though the labels differ, the levels are essentially the same as those proposed by Friedmann.

> Empowerment is an individual-level construct when one is concerned with intrapersonal and behavioural variables, an organizational-level construct when one is concerned with resources mobilization and participatory opportunities, and a community-level construct when socio-political structure and social change are of concern (Zimmerman, 2000, p. 59).

Zimmerman also proposes that there is interaction between the three levels, and 'conscientisation' has been identified as the mediating construct (Israel, Checkoway, Schulz, & Zimmerman, 1994). The concept of conscientisation, as articulated by Freire (1990), recognises the contextual factors that influence the extent to which individuals have control over their future. Conscientisation is the collective critical reflection on the factors that cause and maintain a group's position in society and action towards the goal of social change.

Generally, as exemplified in these definitions, empowerment is a multi-level interacting construct that centres around three overlapping concerns – capacity building, increasing opportunities for control over one's future, and changes in power relations in favour of the less powerful. Further, empowerment takes into account the influence of wider cultural, social and political factors.

Empowerment, as a central development construct, has been subject to criticism. A key concern is that governments use the concept of empowerment to justify the devolution of responsibility for development activities to under-resourced communities. This is in stark contrast to the real goals of empowerment. There is also the risk that development projects, rather than supporting communities to address self-defined priorities instead become controlling. This is a problem when donors take a leadership, rather than supporting, role. An implication of empowerment as a multi-level construct is that development activities should address issues at all levels, including the structural level. Therefore, attention should be paid to ensuring development initiatives do not have solely a lower-level focus.

Postdevelopment

Postdevelopment is distinct from alternative development in that it holds the position that conventional forms of development do not lead to improvements in peoples situations, but instead serve to maintain Western hegemony and power (Kothari, 1988; Rist, 1997; Sachs,

1992). Postdevelopment promotes an approach whereby communities identify their own issues to be addressed, generate their own solutions, and lead community-based initiatives that will contribute to their own positive advancement on their own terms. This approach takes full account of local social and cultural factors. Critiques of postdevelopment raise concerns that it undermines development initiatives that have the potential to benefit non-Western groups and that it romanticises indigenous peoples' lifestyles and situations (Corbridge, 1995).

Indigenous Development

Though indigenous peoples have always sought to improve their situation, it is out of concern for the inadequacies of mainstream development initiatives that indigenous forms of development have begun to be articulated in the literature. Like alternative development and postdevelopment, indigenous development is critical of modernisation theory and under-development theory for the formulaic approach that assumes universal application. A most damning criticism however, is that these approaches to development are essentially a modern and more subtle form of colonisation: "...the nature and intent of the 'development' relationship resembles little more than an advanced form of colonisation" (Puketapu, 2000, p. 25).

Conventional development paradigms have portrayed indigenous peoples as backward communities with internal characteristics that impede development towards Western ideals. Development initiatives have characteristically operated with disregard for indigenous peoples' preferences, priorities, and aspirations, and have resulted in their further marginalisation. In essence, the dominant paradigms have been Euro-centric, assimilative, and top-down (Loomis, 2000a; Puketapu, 2000; Young, 1995). Not surprisingly therefore, conventional development practice has tended to benefit non-indigenous groups and be at the expense of indigenous peoples, leading to their further marginalisation.

Indigenous peoples dissatisfaction with conventional approaches has led them to begin to articulate distinctly indigenous development theory based within their own worldviews. Loomis (2000: 896), a non-indigenous writer commenting on indigenous concerns states:

> Fourth World peoples in advanced post-industrial societies are asserting their right of self-determined development. They are questioning the wisdom of Western paths, and looking for guidance to the recovery of traditional perspectives.

Emerging indigenous development theorising has, however, received little recognition from conventional development theorists and practitioners.

> The debate and theorizing [of mainstream development] has largely ignored attempts by indigenous peoples, particularly in advanced post-industrial societies, to articulate their own self-determined "holistic development." There are several reasons why this is the case, not the least of which is the linking of indigenous knowledge and practices with "traditionalism" by die-hard adherents to modernization theory (Loomis, 2000a, p. 893).

A lack of recognition by mainstream counterparts has not stifled the enthusiasm of indigenous peoples to articulate their own approaches to development and their expectation that they will take the leadership role.

> Implicitly, indigenous peoples expect control of the development process. For this to happen, the revitalisation of local institutions, networks, traditions, values, processes and relationships is an essential requirement (Puketapu, 2000, pp. 9–10).

Indigenous development recognises the value of indigenous communities 'cultural capital'. Cultural capital, as defined by Berkes and Folke (1992, 1994), includes traditional knowledge, and shared world-views, ethics and values.

According to Loomis (2000),

> ...'social/cultural capital' is already understood as a vital resource for indigenous efforts to conceptualise and accomplish their own self-determined development....Research confirms that vital cultural institutions and effective governance are important in achieving successful development as defined by tribes... (p. 896).

Indigenous development centres on indigenous peoples' own aspirations for self-determination, has as a central concern the maintenance of cultural integrity, and focuses on benefits for indigenous peoples (Durie, 1998; Kawagley, 1995; Loomis, 2000a). Generally, indigenous development is holistic in nature, pays particular attention to cultural factors, is cognisant of diversity, and acknowledges existing social and cultural capital (Brohman, 1995; Grey, 1997; Loomis, 2000a).

Māori Development

Māori development has much in common with what has been articulated about alternative development (particularly empowerment), postdevelopment and indigenous development. Also, in a fashion similar to the main development studies paradigms, the genesis of Māori development is located in the distant past, and its evolution can be traced from that time to the present.

The Evolution of Māori Development

The emergence and subsequent progress of Māori development has taken place over a number of centuries. Five clearly defined periods, each with distinct trends, can be identified to describe the evolution of Māori development. There is a heavy emphasis on the post-European contact period because this is when a national Māori identity emerged, and when the Māori population became compromised, heralding the need for Māori development strategies.

Pre-1900: Adaptation for survival

Gardiner (1995) traces the beginnings of Māori development to over 1000 years ago when Māori began their migration from other parts of Polynesia to Aotearoa (the original name for New Zealand). Although there has been considerable debate regarding the timing of Māori arrival and settlement, it is generally estimated as around 1000–1350AD. Māori tribal tradition also recognises another ancestral group resident in Aotearoa before the arrival of those from Polynesia; ancestors commonly referred to as the Kahui Maunga (see Broughton, 1979).

The Māori who had arrived from central Polynesia faced the immense task of adapting to a much colder and less hospitable environment than they were accustomed to. Fundamental adaptations of clothing, housing, and food collection were required for survival (Buck, 1977). Durie (1999a) suggests that the initial threat to survival posed by a new environment was centuries later replaced by the challenge of confrontation with European settlers.

It has been estimated that when first sustained contact was made with Europeans in 1769 the Māori population was approximately 100 000 (Pool, 1991). The first European settlers, who mainly intermarried and lived amongst Māori, were whalers, sealers and traders. However, by the late 1830s organised colonisation had begun (King, 1997). Up until 1835 Māori society was made up of a large number of tribes that would form confederations from time to time

as circumstances required. However, in that year a national Māori identity emerged for the first time when the Declaration of Independence was signed (Durie, 1998). In 1840 Māori chiefs and the British Crown signed the Treaty of Waitangi. The Treaty was intended to protect Māori interests, promote settler interests and secure strategic advantage for the British Crown (Adams, 1977). Debate over the meaning and application of the Treaty is on going, much of it stemming from inconsistencies between the English and Māori language versions of the Treaty. The arrival and settlement of Pākehā (New Zealanders of European extraction) had devastating effects on the Māori population, including musket wars and infectious diseases such as measles, tuberculosis and influenza. The most significant influence with far-reaching implications was the large-scale alienation of Māori land.

The period from 1845 through to 1870 was characterised by large-scale conflicts over land between Māori and Pākehā. The 'New Zealand wars' were a series of wars mainly centred in Northland, Taranaki, Waikato, and the Bay of Plenty (Belich, 1986). During the same period, vast tracts of land were alienated through aggressive land purchasing by the Government, confiscation, and the activities of the Māori Land Court. From 1840 to 1891 Māori land ownership diminished from nearly 30 million to less than five million hectares (Durie, 1998). Land alienation removed not only the Māori economic base, but also the spiritual and cultural foundation of Māori society. A clear link can be traced between land loss and Māori population decline towards the end of the 19th century. The same connection has been identified among other indigenous peoples who suffered land loss through colonisation (Kunitz, 1994; Pool, 1991).

1900–1950: Re-emerging Māori leadership

By the early 20th century, the multifaceted impact of colonisation had seriously undermined customary Māori leadership (Walker, 1990). The Government's position on tohunga (customary specialists in a range of areas who provided traditional leadership) was made clear in the Tohunga Suppression Act 1907. The Act made it illegal to practice as a tohunga, and thereby outlawed traditional forms of Māori leadership. However, new forms of Māori leadership had begun to emerge in the form of Māori people who were both culturally skilled and Western trained professionals.

Apirana Ngata, Maui Pōmare and Peter Buck exemplified the new breed of leadership. They advocated adaptation to and working within the introduced structures of government. In particular, they supported the adoption of Western democracy, justice, education and health

practices. Other leaders of the time, such as Rua Kenana, believed Māori sovereignty was the key to a Māori recovery from dispossession and disease (Durie, 1999b). Durie identifies two distinct approaches to Māori development at this time:

> One approach advocated adaptation to western society, and to the law, as well as the retention of a strong Māori cultural identity. The other approach also supported the acquisition of western knowledge and skills but placed greater emphasis on Māori control and autonomy with less dependence on government goodwill (Durie, 1999b, p. 1).

In the period 1900–1950 Apirana Ngata, played a major role in Māori development efforts. With the issues of mere survival addressed, and consistent with the importance placed on Māori identity, Ngata led the reinvigoration of Māori visual and performing arts. As Walker (1990) points out, Ngata's leadership spanned a broad spectrum of Māori causes, and during the first half of the 20th century he facilitated the retention and development of Māori land. Consolidation of land interests was seen as a way to prevent alienation (Walker, 1990) and to provide a tribal, rather than individual economic base (Durie, 1998). These efforts at harnessing what was left of the Māori land resource led to positive outcomes for many decades. Ngata's influence was also felt during World War II with his vigorous efforts to enlist Māori to fight in the War, and thus increase a Māori sense of citizenship (Walker, 1990).

The central theme advocated by the new Māori leaders during the period 1900–1950 is well expressed in a whakatauākī from Ngata:

> E tipu e rea mō ngā rā o tō ao.
>
> Ko tō ringaringa ki ngā rākau a te Pākehā hei oranga mō tō tinana.
>
> Ko tō ngākau ki ngā taonga o ō tīpuna hei tikitiki mō tō māhunga.
>
> Ko tō wairua ki te Atua nāna nei ngā mea katoa (Walker, 2001, p. 397).

In essence, the whakatauākī stresses the need for Māori to make full use of Western approaches and tools while maintaining a secure identity as Māori, and to acknowledge the spiritual realm in order to achieve Māori-defined goals.

1950–1975: Urbanisation and protest

World War II acted as a catalyst for Māori urbanisation. Many of those who did not go to war shifted to cities to work in the essential industries as part of the war effort. After the War many Māori returned service personnel used skills learnt in the armed forces to find employment in the cities rather than resettling in traditional homelands (Walker, 1990). Māori abandoned rural poverty en masse in search of a better life in the city. Durie (1998) reports that in the space of 25 years, 80 percent of the Māori population had moved from tribal homelands to live in urban areas.

The urban migration brought with it many challenges for Māori society, not the least of which was the diminished significance of tribal identity and the limited feasibility of maintaining extended family relationships. Because of the significant distances between the traditional homelands and the urban centres it was difficult for urban Māori to maintain active links with their traditional homelands and with those of their kin remaining there. The ahi kā, or traditional tenure of tribes was largely left to those remaining in the homelands to maintain. The maintenance of ahi kā is of central importance to Māori society. The urbanisation of such a large proportion of Māori therefore significantly changed the structure of Māori society by introducing a new relationship between those remaining at home and the large proportion of Māori now in the urban centres (Karetu, 1990).

Apart from the changes to structures and relationships within Māori society, Māori–Pakeha relations also faced a new challenge. For the first time since the land wars of the previous century there was widespread contact between Māori and Pakeha (King, 1997).

Urban living did not provide the panacea that many Māori had hoped for. It was their marginalized position and the resultant lack of autonomy that provided the catalyst for Māori political activism in the 1960s and 1970s. Māori shared the concerns of the global indigenous peoples' movement, and had much in common with other social movements such as the women's liberation movement, the environmental movement, and the trade union movement. While the Māori movement worked closely with other social movements, a range of distinctly Māori protest groups were formed to facilitate Māori advancement, the most well known of which was Nga Tamatoa. This activist group advocated, among other issues, the promotion of the Māori language (Walker, 1990). During this period, the most high profile protests were the 1975 land march regarding land alienation, the Bastion Point protest also in relation to land, and the Waitangi Day protests that called on the Government

to honour the Treaty (Durie, 1998; Walker, 1990). While protests generally tended to focus on land and other natural resources issues, at the centre of their concerns was increased Māori control over their own development.

1976–2000: Treaty issues and addressing disparities

Very soon after the 1975 land march, the Treaty of Waitangi Act was passed in Parliament. The Act led to the establishment of the Waitangi Tribunal, charged with the responsibility of making recommendations on Māori claims that the Crown had not fulfilled its obligations under the Treaty of Waitangi. Initially, the Tribunal's jurisdiction only included Crown breaches following the passing of the Act (Kelsey, 1984). However, the jurisdiction was later extended by the 1985 amendment to the Act to cover retrospectively the period to the signing of the Treaty in 1840.

The establishment of the Waitangi Tribunal provided a forum for Māori to have their claims regarding Crown breaches of the Treaty of Waitangi heard. The claims and settlements process lead to much debate throughout New Zealand, if not a major national preoccupation (Durie, 1998). In particular, the preparation of claims and subsequent settlements generated an enormous amount of activity within Māoridom. However, the process also invoked much tension within Māori society at both local and national level. Māori expended (and continue to expend) large amounts of resources, time and energy in contesting (often in court) various claims and/or settlements. The drawn-out issue of the Treaty of Waitangi Fisheries Settlement, signed in 1992 and made law in 1993, has yet to be concluded. This issue has caused major divisions within Māoridom at numerous levels: within tribes, between different tribes, and between tribes and urban pan-tribal groups. Litigation has also been extensive, including consideration at the Privy Council in England (Durie, 1998).

In 1961, the Hunn Report gave evidence of wide disparities in the socio-economic position of Māori relative to other New Zealanders. Māori dissatisfaction with their marginalized position, which had motivated activism in the 1960s and 1970s, had not dissipated as Māori continued to be over-represented in terms of negative indicators of socio-economic status.

Māori have lower rates of participation and attainment in education (Te Puni Kōkiri, 1998). The 1996 census showed a Māori unemployment rate (17.5%) three times higher than that of European New Zealanders (5.4%) (Statistics New Zealand, 1997). Given these figures, it is not surprising that Māori have relatively low annual household incomes, are almost four times as likely to receive their total income from social welfare benefits, and are less likely to

own their own home (Te Puni Kōkiri, 1998). Using the NZDep96, a tool that can measure deprivation levels across ethnic groups, gross disparities have been demonstrated between Māori and the category 'European and Other' (Crampton, Salmond, Blakely & Howden-Chapman, 2000). Wide health status disparities have also been demonstrated. According to the Ministry of Health, the Māori rate of avoidable hospitalisations is 60% higher than the 'European and Other' category, and on average Māori have a shorter lifespan and spend a higher proportion of their life with a dependent disability (Ministry of Health, 1999).

By the mid- to late-1990s the Government had recognised the need to address the major socio-economic disparities between Māori and other sections of the population. The Ministry of Māori Development states that:

> One of the Government's strategic objectives for Māori development is to make significant progress towards developing policies and processes that lead towards closing the economic and social gaps between Māori and non-Māori (Te Puni Kōkiri, 1998, p. 6).

Cunningham (1999a) terms this work 'Māori advancement', which relies on "conceiving a disparity, for example, setting goals for progress and measuring performance and achievement along the way" (p. 3). While the comparative nature of Māori advancement is helpful in measuring progress in addressing disparities it also runs the risk of marginalizing Māori aspirations (Smith, 1991).

The Government's *Closing the Gaps* strategy was roundly criticised in some quarters; one of the main arguments being that disparities in society are a function of socio-economic position rather than a result of the notion of ethnicity (Chappell, 2000). Due to this criticism, the *Closing the Gaps* initiatives based on ethnicity were officially abandoned; the disparities, however, remain.

2001– Global knowledge society

As Māori enter the 21st Century, they face a new world with a very different set of rules from those their ancestors encountered at the beginning of the last millennium (Durie, 1999a). Due to developments in information and communications technology (ICT), improved transport networks, and New Zealand's increased immigration and emigration activity, the world is no longer vast – nor is New Zealand's geographic isolation from the world at large so significant. Furthermore, the New Zealand Government is intent on decreasing the

country's economic dependence on land-based industries and shifting the focus to a knowledge-based society (MoRST, 1999a).

The increased use and capacity of ICT has ushered in the 'information revolution', a globally significant phenomenon. Some liken the scale of implications of the information revolution to that of the industrial revolution. For example, the Information Technology Advisory Group (ITAG) states:

> There can be no doubt that the cycle of technology development and implementation is accelerating and that we are moving inexorably onward, out of the Industrial Age and into the Information Age (ITAG, 1999, p. 1).

Due to ICT developments there is now potential for those physically based in New Zealand to communicate, interact, and collaborate with anyone else in the world. ICT is a fundamental component of the knowledge economy, "for New Zealand, the Internet is the modern equivalent of the freezer ship that revolutionised our economy last century" (ITAG, 1999, p. 2).

The speed, frequency and ease of international travel have been greatly enhanced in recent times. The improvements in international travel networks offer increased opportunities for New Zealand based organisations to meet, interact and collaborate physically with groups or individuals based anywhere in the world.

Added to the superior interaction opportunities presented by enhanced ICT and travel networks is the increased potential for more permanent contact with groups or individuals through immigration and migration. In August 2001, the Knowledge Wave Conference made a series of recommendations on how New Zealand can improve its economic and social performance and create a knowledge society. One of the key recommendations was to "Increase opportunities created from New Zealand's expatriate community by developing and expanding links and information flows" (Knowledge Wave Trust, 2001, p. 6).

The opportunities presented to New Zealand by the emerging global knowledge society are immense, and opportunities for Māori development are equally significant. Consistent with the direction taken by Government, Māori are presented with key opportunities to consolidate the 'Māori estate' (Durie, 2002a) by adding value to commodities being produced

on the land and from the sea. Diversification into the airwaves through the business of third-generation radio frequencies also holds much promise.

Increased ICT capacity, improved travel networks, and increased immigration and emigration, present Māori with opportunities to participate meaningfully in the global context by fostering more meaningful links with other groups and individuals be that in the political, social or economic sphere. These types of relationships could facilitate what Durie (2000) envisioned as treaty-based arrangements with groups other than the New Zealand Government.

Besides the opportunity for Māori to develop productive relationships with other groups, there is the possibility for Māori to strengthen relationships with their own people, no matter where they are physically based. In much the same way that the Knowledge Wave Conference promoted taking advantage of New Zealand's expatriate population, there is the opportunity for Māori to 'reconnect' with those based around the globe. This may occur at an iwi level with interaction between those based at the traditional homelands, sometimes referred to the guardians of the ahi kā (home fires), and urban-based Māori within New Zealand; and now those situated further abroad – be that Sydney, London, Hong Kong or New York.

As Māori contemplate taking part in the global knowledge society there is a heightened need to retain and develop a secure Māori identity. The global knowledge society threatens the uniqueness of cultures because of its pervasiveness and the dominance of English language and United States-based content (Herring, 2001). And as Durie (1998, p. 240) concludes "Māori want to advance as Māori, and as citizens of the world".

Indicators of Māori Development Progress

Māori development efforts have thus far spanned several centuries, have mainly been focussed in New Zealand, and are increasingly taking place in the global context. They encompass a wide range of social, economic, cultural and political endeavours, and have accomplished much for Māori and New Zealand society. Attempts have recently been made to formulate Māori development indicators to monitor the success or otherwise of the substantial Māori development efforts. In 2001, as part of its function to monitor the Crown responsiveness to Māori, Te Puni Kōkiri developed a monitoring framework that includes three groupings of indicators: universal (applicable across New Zealand), Māori

specific, and Māori organisational. The four levels of application were: local, regional, national and international (Te Puni Kōkiri, 2001). In conjunction with Te Puni Kōkiri's monitoring framework, a group from Massey University developed *Te Ngāhuru,* a schema of Māori-specific outcomes and indicators (Durie, Fitzgerald, Kingi, McKinley & Stevenson, 2002).

Although a definitive tool to measure Māori development outcomes remains elusive, the six components of *Te Ngāhuru* offer considerable enlightenment. These components are: Principles to guide application of outcomes measurements; Outcome Domains; Outcome Classes; Outcome Goals; Outcome Targets; and Outcome Indicators. *Te Ngāhuru* represents one of the first Māori specific measures for Māori development outcomes, and as such it is an important step in strengthening the interaction between Māori development practice and Māori development theory.

Towards Māori Development Theory

Māori development has a primary concern for Māori advancement as Māori, and is therefore in opposition to the Euro-centric and assimilative processes and goals of the dominant development paradigms. That does not, however, exclude the use of generic development ideas and tools where they can usefully contribute towards meeting the goals of Māori development.

Māori development can be located within broader indigenous development, with its primary focus on self-determination. It also has strong parallels with empowerment theory. Māori have committed themselves to developing their own distinctive solutions to their marginalized position, and this commitment continues to be expressed in the form of Māori development. Māori development is a process to facilitate Māori self-determination and achieve Māori advancement, that is, improvement in the social, economic, cultural and political position of Māori in New Zealand society and globally (Durie, 1999c; Love, 1999; Puketapu, 2000).

Self-determination, in relation to Māori development, is about increasing Māori control over decision-making in relation to Māori affairs and their future development (Puketapu, 2000). Importantly, Māori development relies upon the initiative of Māori, and therefore arises from within and draws both on distinctly Māori methods and methodologies and on other approaches (Durie, 1999c; Ratima, 2001).

Though there are preliminary writings on Māori development, they tend to have a pragmatic focus. The articulation of Māori development theory is in its infancy. That does not mean that Māori development lacks theory, but that its underpinning theory is implicit (Ratima, 2001). According to Loomis (2000), Māori development is generally located within customary Māori conceptual frameworks. There is some consensus that the central characteristic of these types of frameworks is holism or integration (Cunningham, 1999a; Durie, 1996; Loomis, 2000a; Puketapu, 2000; Royal, 1993; Walker, 1990). In Māori development terms, a holistic or integrated approach would require that the links between social, economic, cultural, spiritual, political, and historical factors be taken into account. Like other forms of indigenous development, the theory underpinning Māori development has not yet been articulated in a comprehensive or consistent way.

Preliminary writings on the theoretical nature of Māori development have tended to identify themes and principles that underlie or characterise Māori development practice. In many instances these themes or principles have arisen directly from hui.

Māori Development Themes

The 1984 *Hui Taumata* (the Māori Economic Summit) instigated the Decade of Māori Development (1984–1994). Durie (1998) identified six themes that underlie Māori development as conceptualised at the Hui – 'the Treaty of Waitangi', 'self-determination', 'tribal development', 'economic self-reliance', 'social equity', and 'cultural advancement'. Māori development is focused at the level of the collective, is concerned for the equitable distribution of benefits, and does not give precedence to economic development at the expense of social, cultural, and ecological concerns (Durie, 1998; Loomis, 2000a).

The 1994 *Hui Whakapūmau,* hosted by the Department of Māori Studies, Massey University, to mark the conclusion of the Decade of Māori Development assessed the progress that had been made and looked towards future directions (Department of Māori Studies, 1995). The following 'consensus themes' emerged from the Hui. 'Building on gains already made' referred to the need to consolidate progress made in the years leading up to and during the Decade. 'Addressing contemporary Māori realities' is concerned that strategies for Māori advancement must recognise the diversity of Māori people and must therefore be relevant to their variety of situations. As a theme, 'A changing world' highlights that change is inevitable, and Māori must have the resilience to adapt quickly and effectively to change, and benefit from new circumstances. Therefore, attention should not be fully absorbed in current issues

at the expense of preparedness for the future. 'Embracing new technologies' refers to the need for Māori to be involved in the knowledge society if they are to benefit from those advances. 'The right to be Māori' is concerned with ensuring that Māori have access to Māori resources, and have opportunities in their everyday life to live as Māori. 'Taking charge' is about self-determination, and therefore increased opportunities for Māori control over their own affairs.

Te Oru Rangahau, the 1998 Māori research and development conference, identified five desired outcomes for Māori development: 'tino rangatiratanga (self-determination)'; 'equity and social well-being'; 'outcomes which endorse Māori custom and identity'; 'resource development and economic growth'; and 'universality'. These outcomes acknowledged the global context in which Māori development occurs, and urged Māori to embrace the knowledge of nations and groups elsewhere (Durie, 1999c).

In July 2000 another major Māori development hui was convened. It was called *Toi te Kupu, Toi te Mana, Toi te Whenua: Māori Development in a Global Society*, or simply the *Millennium Conference*. At the conclusion of the Conference five key Māori development goals were identified: 'Live the legacy', essentially striving for development while retaining a secure Māori identity. 'Reclaim our lands, our waters and our air', which acknowledged that debate is required to determine what is the extent of Māori ownership of New Zealand's natural resources. 'To be strong, healthy and wealthy' identified the need to strive for good health and education standards while also building wealth. 'Standing tall in our own country and exercising wise governance' encouraged Māori to seek to build an equal partnership with the Crown based on the Treaty of Waitangi while at the same time fostering positive relationships within Māoridom by avoiding building barriers between various groups – be they iwi, urban based, hapū or even whānau. 'Embracing other peoples their cultures, technologies and lands' emphasised the importance of learning lessons from groups outside of New Zealand, particularly other indigenous groups, and of fostering positive relationships with them, perhaps even formalised by treaties (Durie, 2000).

From the Māori development literature cited above it is possible to identify overlapping and additional principles of Māori development; self-determination, partnership, participation, protection, capacity building, collective autonomy, cultural integrity, diversity, and holism. Some of these themes and principles have already been discussed and will not be further elaborated.

The Treaty principles of partnership, participation, and protection require that Māori and the Crown will have an equal relationship as partners, that Māori will have genuine input into all decisions relevant to Māori futures, and that the State has a responsibility to proactively facilitate Māori advancement (Durie, 1998).

Capacity building is a precursor to genuine partnership, participation, and protection (Love, 1999). Collective autonomy overlaps with the self-determination theme to the extent that it is also concerned with increasing Māori control over their own affairs, but is distinct in emphasising that the collective Māori good has priority over the good of the individual (Durie, 1998).

The principle of cultural integrity expresses the choice of Māori to perpetuate their own cultural distinctiveness. A secure cultural identity will require access to Māori cultural heritage (such as the Māori language and natural resources) and access to Māori institutions (such as hapū, iwi, and marae) (Durie, Black, Christensen, Durie, A., Taiapa, Potaka, & Fitzgerald, 1995; Karetu, 1990; Walker, 1996). Diversity as a principle requires recognition that while Māori collectively may have some common characteristics, they are not a homogenous group (Durie, 1995). Therefore, there is no single approach to Māori development that will lead to the equitable distribution of benefits to all Māori. Instead, a range of Māori development mechanisms will be necessary if Māori collectively are to benefit and if initiatives are to be relevant (Cunningham, 1999a).

That is not to say that Māori as individuals should be overlooked. Although Māori are by no means a homogeneous group, there are sufficient commonalities to merit treating Māori as a distinctive population in terms of measuring social, economic and cultural outcomes. This is known as the principle of Māori commonality (Durie, Fitzgerald, Kingi, McKinley & Stevenson, 2002).

Holism as a principle is concerned that a comprehensive approach is taken towards development, an approach that is cognisant of broad social, economic, cultural and political factors (Durie, 1998). Furthermore, holism allows the parallel consideration of complimentary views such as Māori diversity and Māori commonality.

Summary

Māori development can theoretically be located in relation to development studies theory. In particular there are strong similarities to indigenous development and empowerment theory. An examination of Māori development themes, principles and outcomes in the literature enables the identification of recurring themes relevant to the current study. There are indications that the Treaty of Waitangi is a key document which provides a context for Māori development initiatives as they relate to the relationship between Māori and the Crown. Māori development has its own rhythm that is derived from longer time spans and Māori-defined aspirations. Māori development should contribute to Māori advancement, and therefore ensure the maximum benefits for Māori collectively and individually, as well as growth in the Māori asset base.

The theme of universality indicates advancement should not only be seen within the New Zealand context but globally, and therefore building global alliances is also a possible strategy. Issues of control are important, in particular the facilitation of changes in power relationships to ensure greater opportunities for Māori input into decision making that affects their own future. Of significance is the consolidation of progress to ensure synergy, emphasising commonalities and points of agreement between iwi, and between iwi and urban groups. Capacity building, and an enhanced ability to adapt to change will be vital. Equally important are the issues of strengthening Māori cultural identity and acknowledging the diverse realities of Māori people.

CHAPTER FOUR

MĀORI AND THE CONTEMPORARY RESEARCH, SCIENCE AND TECHNOLOGY SECTOR

'Ki ngā whakaeke haumi'[7]

Introduction

The aim of this chapter is to explore the links between the contemporary Research, Science and Technology (RS&T) sector and Māori. First, the research infrastructure in New Zealand is considered, starting with its evolution and a summary of major developments up until current times. Second, the interface between the RS&T sector and Māori is examined. The examination begins with an analysis of Māori aspirations for research and then moves, using the structure of the RS&T sector as a frame of reference, to a commentary on the key stakeholders of Māori specific research. The chapter concludes by considering how Māori aspirations are or are not being met by the current RS&T sector.

The New Zealand RS&T Sector

New Zealand's public Research Science and Technology Sector is a little over 140 years old. An assessment of its beginnings and subsequent development provides a sense of how the contemporary Sector functions and how it relates to Māori.

Evolution

Establishment

The genesis of the New Zealand research infrastructure pre-dated the establishment of the country itself. The first sustained contact between Europeans and Māori was initiated by the voyage of the *Endeavour*, which, as noted in Chapter Two, was an expedition motivated by research and supported by the Royal Society in England (Palmer, 1994; Tuhiwai-Smith, 1999). The first professional scientist to work while residing in New Zealand was Ernst

[7] "Join those who can join sections of a canoe." This whakataukī, "....serves as a metphor that one should seek those leaders [mechanisms] who are able to weld diverse groups into a successful combination" (Mead and Grove, 2001, p. 221).

Dieffenbach. He was appointed by the New Zealand Company in the late 1830s to work on a variety of matters including navigation, geography, geology, botany and zoology. His works *Travels in New Zealand,* published in two volumes in 1843, formed the first general scientific account of New Zealand (Dick, 1957; Palmer, 1994).

Formation of Links between Government and Research

Government funding of research in New Zealand began in 1859 when Ferdinand Ritter von Hochstetter was engaged to prepare a report on a recently discovered coalfield in Drury (Atkinson, 1976). Science and technology policy-making had begun by the 1860s when a stable form of central and provincial government had been established consistent with the New Zealand Constitution Act of 1852 (Palmer, 1994).

Having been educated at various universities in Europe, the politicians of the new colony were supportive of education and science (Atkinson, 1976; Galbreath, 1998; Palmer, 1994). By 1866 the Colonial Museum, Geological Survey, the Colonial Laboratory and the Colonial Observatory were established, and James Hector was appointed as director of all these institutions (Atkinson, 1976). According to Galbreath (1998) in the following years Hector was also responsible for meteorological services, seismological records, the patent library, standards weights and measures, and the Colonial Botanical Gardens. Hector also played a major role in the key non-government science organisation of the time – the New Zealand Institute (the predecessor to the current Royal Society of New Zealand). The New Zealand Institute Act was passed in 1867. It established "an Institute for the advancement of Science and Art in New Zealand" (Atkinson, 1976, p. 11). The Institute's inaugural meeting, held in August the following year and attended by a number of politicians (Hector, 1875), was consistent with the sentiments of Palmer and others regarding the keen interest that the early leaders of the colony had in science. In 1869 the University of Otago was established as New Zealand's first university.

In contrast to the quite rapid establishment of the various science institutions in the 1860s, during the latter years of the 19th and beginning of the 20th century there was a notable decrease in the active development of the science and research infrastructure (Galbreath, 1998). Many commentators attribute this to a change in composition of the political fraternity at the national level. The Liberal Party won the 1890 election, and the political power base shifted from the English-born, university-educated politicians to the first generation of New Zealand-born members of Government. The New Zealand-born

politicians "had little use for learning or theory in any form, but great faith in practical skills and commonsense" (Atkinson, 1976, p. 12; see also Dick, 1957; Galbreath, 1998; Palmer, 1994). It is not surprising then that the Government led by Richard Seddon fostered a more applied and advisory approach to science and research (Galbreath, 1998).

It took some time for major changes to take place. In the first decade of the 20th century it became apparent that a more comprehensive approach to science was required, with a need for locally based science to inform agriculture. Palmer (1994) reports that third generation farmers saw the virgin fertility of the land nearing exhaustion. Experts from Australia, the United States and Britain were also brought in to help advise farmers how to combat pest and disease problems; however, neither their knowledge nor experience were suitable for local conditions. Added to this, the science of the day had no solutions to many of the problems (Atkinson, 1976).

Formation of Links between Industry and Research

In 1912, when a new Reform government led by W.F. Massey, a farmer-politician, gained power, there was support for reform in science and for scientific help for agriculture (Galbreath, 1998). Another major factor in the establishment of New Zealand's research infrastructure was the threat of war in Europe. British industry had fallen behind its competitors – particularly Germany, which had used scientific research to underpin industry. As a result Britain had become dependent on Germany for many products including some essential war materials (Galbreath, 1998). In 1916 the Committee of the Privy Council in London encouraged all the governments in the dominions to establish a centralised, government-funded science body similar to the newly established English Advisory Council on Scientific and Industrial Research (Hoare, 1984).

In early 1926, Sir Frank Heath, the head of the British Department of Scientific and Industrial Research, was invited by the New Zealand Government to visit New Zealand. He recommended the establishment of an organisation similar to his own, with an accompanying advisory body. Later that year, the New Zealand Department of Scientific and Industrial Research (DSIR) was created in conjunction with the Advisory Council of Scientific and Industrial Research (Palmer, 1994). Initially, the DSIR's role was to co-ordinate and support research in other institutions (such as the Dominion Laboratory). However, under the leadership of Marsden, and especially after Labour's 1935 election victory, the DSIR began to expand (Galbreath, 1998).

Heath's initial report recommending the establishment of the DSIR also urged the development of industry-based research associations to foster partnership between industry and Government (Galbreath, 1998; Palmer, 1994). Under this system the Government (via the DSIR) matched pound for pound contributions made by various industries for research that benefited them. The DSIR also organised and oversaw the research (Galbreath, 1998). Examples of the research associations founded are the: New Zealand Dairy Research Institute; Wheat Research Institute, Fuel Research Association; and the Leather Research Association (Galbreath, 1998). The launch of the DSIR and the various research associations heralded a critical point in New Zealand's research infrastructure's history – links between the research and science community, central government and industry had been made.

In the years leading up to World War II, the university system also expanded. University colleges in Auckland, Wellington and Christchurch had been founded along with agricultural colleges at Lincoln and Palmerston North. Generally speaking, research activities at these institutions were minimal; Palmer (1994) suggests low staff numbers as the reason.

During World War II, New Zealand, like other countries, used science to support the war effort in areas such as radio and radar technology. The DSIR grew significantly (Atkinson, 1976).

Post-World War Two

In the years after World War II, rising government deficits resulted in reduced science expenditure and, worse still, very little strategic analysis of the role of science and development was carried out. The budget cuts and lack of strategic direction caused losses of staff and momentum, with cumulative effects for many years (Palmer, 1994).

The 1962 Royal Commission of enquiry into State Services recommended the replacement of the Council for Scientific and Industrial Research by the National Research Advisory Council (NRAC), and the new council was given responsibility to advise Government on the needs, planning and co-ordination of national research (Palmer, 1994). In 1965 the New Zealand Royal Society replaced the New Zealand Institute and, importantly, a new ministerial portfolio for science was created in Government.

The 1970s saw two key international events have major bearing on the research sector in New Zealand. First was the United Kingdom's decision to enter the European Economic Community (EEC). The loss of the UK as a chief export market meant New Zealand

needed to seek new markets for its established export goods and modify products for other markets, including expanding the economic base into manufactured goods. The second international event was the 1973 'oil shock' or the spiralling international price of petroleum products due to tension between the oil-producing Middle East and Western countries (Galbreath, 1998; Palmer, 1994).

These two events were sharp reminders of the increasingly global nature of trade, and of New Zealand's need for research both to enhance national competitiveness in overseas trade and to lessen its dependency on others for vital resources.

Meanwhile the establishment and consolidation of the NRAC had had mixed success. A positive note was the bringing together of representatives from various sectors such as Government departments, universities, industry, business, and the community into one forum. It was unfortunate, however, that the nature of the public sector did not allow meaningful co-ordination of research across these areas, resulting in the absence of macro-level research policy. The other hampering factor for NRAC was the conflicts of interest within the political and departmental systems (Palmer, 1994), another symptom of the inefficiencies of the public sector in the 1960s and 1970s.

Public Sector Reforms

By the start of the 1980s, the Muldoon-led National Government had amassed a huge foreign debt, was facing weakening terms of trade (Boston, Dalziel, & St John, 1996), and had created a highly regulated economic environment (Davenport & Winsley, undated). At the same time, countries such as the UK, Australia, United States and Canada were beginning to look to private sector management methods to reduce expenditure and increase efficiencies (Manaia, 2002). The reforms introduced by these countries were generally based on theories of economic rationalism (Osborne & Gaebler, 1992), in particular agency theory (Duncan & Bollard, 1992; Kelsey, 1993).

Labour won the snap general election of 1984, and embarked on a radical reshaping of public sector management and crown policy development; an extreme example of the reforms being introduced by other Western governments. The nature and extent of the reforms introduced in New Zealand from 1984 to the early 1990s had grim consequences for local society (see Kelsey, 1993). Despite those consequences, the reforms were adopted in a wide-ranging manner. There was a variety of reasons for the comprehensive nature of the reforms, not the least of which was the bipartisan support from New Zealand's two major political parties (in

the then first-past-the-post electoral system) due to the near-insolvent state of New Zealand's economy (Duncan & Bollard, 1992).

Three chief pieces of legislation introduced between 1986 and 1989 ushered in the public sector reforms: the State Owned Enterprises Act 1986; the State Sector Act 1988; and the Public Finance Act 1989 (MoRST, 2002a).

The major features of the public sector reforms included:

- major downsizing of the public sector;
- devolution of many central government roles in the social services area to elected or appointed bodies, or to private enterprise;
- unravelling of the Government's involvement in the three domains of policy design and advice, purchasing of goods and services, and provision of goods and services;
- introducing accountability based on results or outputs, rather than inputs.

Restructuring of the RS&T Infrastructure

Within the context of the 1980s public sector reforms, the level of Crown funding in research and development was significantly reduced (Davenport & Winsley, undated). By the 1980s DSIR, the Government's focal point for research and science, displayed many of the inefficiencies the public sector reforms were designed to remedy. The Department "was concurrently the largest grouping of scientific laboratories, the provider of science policy advice and it received the largest share of institutional funding from direct Parliamentary appropriation" (Davenport & Winsley, undated, p. 3).

Two Government-commissioned reviews were central to the New Zealand science reforms: *The Key to Prosperity – Science and Technology,* also known as 'The Beattie Report', and released in 1986; and the 1988 *Science and Technology Review – a New Deal.* The Beattie Report's main contribution was the recommendation to establish a Ministry of Research that formulated strategic research priorities but did not itself carry out research. According to Davenport and Winsley (undated) the major recommendations from the 1989 review were: separation of policy advice from the other key functions of funds allocation and from the undertaking of research; contestability of research funding based on scientific merit, cost effectiveness and collaboration between researchers; and the establishment of national science and

technological priorities derived from wide consultation with the community. The important point here is that the recommendations were highly consistent with the wider public sector reforms of the time.

At the same time as these two major reviews were being carried out, other reviews pertaining to the sector were undertaken. A review of social science research recommended that a separate Social Science Research Council be set up and that funding be increased. While the Council was never established, a significant funding increase was forthcoming as part of more widespread reform a few years later (Palmer, 1994). In the health research area, a review team was commissioned to conduct a review of the organisation and of the public funding of biomedical and health systems research in New Zealand. Among the review's 54 recommendations it advised that the Government should continue as a major funder of health research, and that a Health Research Council should be established (replacing the Medical Research Council) as Crown purchaser of health research, while not carry out research itself (Stewart, Scott, & McKay, 1989). Again the delineation between purchaser and provider was clear.

At the end of 1989, the reform of the RS&T infrastructure began. There were two key phases. The first, during 1989—1990, saw the establishment of two Government organisations: the Ministry for Research Science and Technology (MoRST), and the Foundation for Science Research and Technology (FRST). MoRST's primary function was to formulate policy, while FRST's was to allocate funding. The creation of these two organisations began the unbundling of the Government's role in policy advice, purchase, and provision, consistent with the wider public sector reforms and therefore facilitating transparency and accountability (Buwalda, 1998).

The second phase of the reform of the research, science and technology infrastructure took place in 1991 when the new National Government continued with the reforms started two years before. As noted earlier with the wider public sector reforms, bipartisan support from Labour and National allowed continuity between these two phases. This second phase consisted of two main processes: the restructuring of Government science agencies such as the DSIR, MAF Technology, and the Forest Research Institute into a series of Crown Research Institutes (CRIs), and the establishment of research priorities and strategies (Palmer, 1994).

A Task Group was formed in 1991 to make recommendations on the establishment of the number, size, and specific roles of the CRIs (Palmer, 1994). According to Palmer (1994) the rationale given for Crown ownership of the CRIs was:

> Ensuring that strategically important research skills and assets remain in New Zealand, in efficient and effective institutional forms tailored to an agreed purpose and principles of operation; and thus
>
> Preserving an ability to guarantee that science outputs which are commensurate with overall government established outcomes, can be produced to a specific quality, relevance, price and timeliness.
>
> And an additional rider:
>
> Government will not achieve the outcomes it desires from its investment in research, science and technology through reliance on a purchasing mechanism alone (pp. 38-39).

During the debate on how the CRIs should be set up, some Government officials felt that the Institutes should follow the State Owned Enterprises model of aiming for profit, while others went as far as to promote the idea of privatising the Institutes (Galbreath, 1998). However, Palmer (1992) reports it was ultimately agreed that the underlying rationale for investing in RS&T was " not to create a stream of revenue for the government, but rather to promote an infrastructure which would encourage innovation and have a high social rate of return" (p. 39). So, as with the providers in the health sector (Crown Health Enterprises – hospitals), the CRIs remained in public ownership (Galbreath, 1998). The CRIs were launched in July 1992, and the supporting legislation was The Crown Research Institutes Act 1992. The Act is in effect a statutory commitment by Government to maintaining the science infrastructure (Palmer, 1994). After 10 years, an appraisal of the CRIs' performance was carried out in 2002 (MoRST, 2002a).

As mentioned above, a further main feature of the second phase of the RS&T reforms was the establishment of research priorities and strategies. The priority-setting exercise was important in a number of ways. First, it provided some medium- to long-term certainty for the sector, so that once a priorities framework was in place later amendments were to be in the form of minor revision rather than an ongoing pattern of fundamental change (Winsley, 1990). This also allowed for multi-year funding cycles to be introduced (Palmer, 1994).

Second it allowed for priority setting between and within RS&T output classes – an important function in a climate of scarce resources (Winsley, 1990). Third, explicit links to the Government's national level priorities were formalised, enabling funding allocation decisions to be made in light of what constituted high-quality science for the benefit of New Zealand (Winsley, 1990). An example of these explicit links was the establishment of the Cabinet Education, Science and Technology Committee (Palmer, 1994).

Other key players in the restructured RS&T sector included other government departments and universities. Although the primary Crown activity in research had been concentrated within the newly formed CRIs, some research was still undertaken in separate government departments. Departments with a substantial research function included the Department of Conservation and Ministry of Agriculture and Fisheries (MoRST, 1993). University-based publicly funded research was supported in part through the new purchaser, FRST, and also in part through Vote Education.

The Contemporary RS&T Sector

Once the Government had completed the restructuring of the public sector, the major developments that led to the present form and function of the contemporary RS&T sector started. In 1996 the Government began to consider New Zealand's position in the emerging global knowledge society.

Towards the Global Knowledge Society

As noted earlier, the emerging global knowledge society will have profound effects on New Zealand. According to MoRST (1999b) some of the commonly understood characteristics of the global knowledge society are:

- knowledge is a major source of economic advantage;
- rapid changes in technology will happen;
- greater investment in research and development will be needed to generate new ideas;
- greater use of information technology will happen;
- more knowledge-intensive businesses will develop and grow;
- increased networking and working together will be needed for success;

- there will be rising skill requirements in order to support increased research, business, technology and development.

MoRST also makes the point that RS&T will play a central role in the knowledge society (MoRST, 1999b).

The first major step in the RS&T sector's preparation for New Zealand's entry into the global knowledge society was the *Foresight* Project. The Project's two main goals of encouraging strategic thinking across sectors and developing priorities for the Government's investment in RS&T were similar to the direction that had been taken in the early to mid-1990s. However, the point of difference was that the *Foresight* Project aimed to link the Government's RS&T investment with New Zealand's development as a knowledge society (MoRST, 1998). Furthermore, the Project recognised the globalisation trend, with one of the four 'key imperatives' being "A globalised economy requires us to be internationally competitive" (MoRST, 1998, p. 5).

Rather than a centralised Government-designed approach to developing New Zealand's RS&T's priorities, the *Foresight* Project encouraged input from outside Government. The Project involved wide consultation across the New Zealand RS&T community, with 140 groups submitting strategies from areas as diverse as health, horticulture, culture and heritage, information technology, and animal products (MoRST, 1999a). Significantly, *Foresight* also brought together business people, social organisations and researchers through the various conferences, workshops, debates and discussions that took place (MoRST, 1999b).

One of the results of the *Foresight* Project was a document entitled *The Blueprint for Change.* The document provided "a blueprint for a framework designed to ensure that Government's investment in RS&T is directed towards stimulating the development of a knowledge society in New Zealand" (MoRST, 1999a, p. 5). Unlike previous Government statements regarding RS&T policy, *The Blueprint* focussed on what the Government intended to accomplish through its investment, rather than how much it proposed to spend (MoRST, 1999a).

The Blueprint provided the framework that formed the basis of the output-contracts with the Government's major RS&T purchase agents (MoRST, 1999a). The framework had three components.

First was a group of four high-level goals to set the key direction for investment decisions across the science envelope. The science envelope is comprised of Vote RS&T, the research

component of funding for tertiary institutions in Vote Education, and Government departments' investment in operational research. The high level goals for the Science envelope were: Innovation; Economic, Environmental, and Social (MoRST, 1999b).

The second part of the framework was a set of 14 target outcome areas that had been distilled from the various fora convened as part of the *Foresight* Project. Each of the 14 target outcome areas was aimed to contribute to the four high-level goals.

The third part of the framework was a performance measurement system, linking RS&T investments to the science envelope goals (MoRST, 1999a).

The Blueprint for Change led the two main RS&T purchasers, FRST and the HRC, to realign the funding streams available to research providers (FRST, 2000; Walton & Le Gros, 1999). Both organisations implemented a regime based on portfolios that were aligned with the 14 target outcome areas documented in *The Blueprint for Change* (Walton & Le Gros, 1999).

From 2000 to 2002 a number of developments took place in the RS&T sector, largely concerned with the continuation of the changes introduced as a result of *Foresight* and *The Blueprint for Change*. In 2000, the Government established the Prime Minister's Science and Innovation Advisory Council (SIAC). Although this body was only in existence until April 2002, it played a key role in developing the 'Growing an Innovative New Zealand' framework (MoRST, 2002b). Added to this was the move in 2001 to increase investment by the private sector in RS&T. New Zealand traditionally has had a very low rate of private sector investment into research and development compared with other comparable countries (Bulwalda, 1998; MoRST, 2000). MoRST (2001) reports that in the 2000/01 Budget, Government made the largest ever increase in their investment to partner private sector research and development. In that same budget a new Venture Investment Fund (VIF) was established. One of VIF's primary focuses was to accelerate the development of the venture capital industry in New Zealand, which in turn would support commercialisation of innovations from CRIs, universities and the private sector. The VIF began operations in 2002 (MoRST, 2002b).

During 2002, the Government focused more closely on increasing the contribution of research and innovation to economic and social transformation. This included the announcement of a new growth and innovation framework, the establishment of five Centres

of Research Excellence, and the facilitating of 'research consortia' groups that encourage interactivity between researchers and research users (MoRST, 2002c).

Salient Features of the Contemporary RS&T Sector

From the literature pertaining to the evolution and structure of New Zealand's contemporary RS&T sector it is possible to identify the following six salient features:

- the complementary roles of policy maker, purchaser and provider;
- focus on outputs and outcomes;
- broad approach to RS&T across sectors;
- four strategic goals of innovation, economic, environmental, social and 14 target outcomes;
- preparation for New Zealand's participation in the global knowledge society;
- provision for a Māori focus.

The first five of these features, although being shaped by New Zealand's particular situation, are not unique to New Zealand. However, one distinctive feature of New Zealand's current science system is the provision of a focus on Māori specific research. The responsiveness of the NZ RS&T sector to this issue is questionable, and its effectiveness in supporting Māori-specific research to date is open to debate.

Māori and the Contemporary New Zealand RS&T Sector

Māori have conducted pragmatic research for many generations, but since European contact tensions between Māori world-views and Western world-views have come to the fore. It must be recognised that the nature of the contemporary RS&T sector is a product of Government design, largely driven by a Western world-view and value system. Consistent with a Māori development centred approach it is necessary to examine what Māori themselves want – what their aspirations are for research.

Māori Aspirations for Research

Various writers have articulated Māori aspirations for research. However, these writers have tended to concentrate on a particular discipline, timeframe or geographical area. In 1998 the *Te Oru Rangahau Māori Research and Development Conference* was held at Massey University in

Palmerston North. The conference was attended by over 250 delegates, and more than 50 papers were presented. The topics of discussions were wide-ranging, including education, health, the environment, psychology, methods and ethics, and, the Treaty of Waitangi. Perhaps the most distinctive feature of the Conference was that it was couched within the wider context of positive Māori development – the Conference, as its title suggested, set out to examine the links between research and Māori development. At the conclusion of *Te Oru Rangahau,* a summary of the conference was presented by way of the *Te Oru Rangahau framework for Māori research and development.* The Framework had two dimensions: outcomes for Māori development, and strategic goals for Māori research. The eight strategic goals for Māori research provide a useful structure for considering Māori aspirations for research (Durie, 1999c, p. 411):

- retention, transmission, and development of old and new knowledge;
- a code of ethics;
- national focus for Māori research and development;
- generation of evidence based policies and practices;
- analysis based on Māori frameworks;
- human resource development;
- alliances between disciplines, sectors, and institutions;
- use of multiple methodologies.

Retention, Transmission, and Development of Old and New Knowledge

Durie (1999) alludes to the fact that while knowledge generation is the prime purpose of all research, there are other considerations. Māori have concluded that research must achieve more than mere creation of knowledge. Arohia Durie points out that in the university context "the contribution of research to the development of new knowledge can become an end in itself...more is required" (Durie, A., 1999, p. 257). Love (1999, p. 10) made a similar point: "It is not enough to simply research for the sake of knowing", a concern Stokes (1985) had articulated over 10 years earlier.

Te Awekotuku, (1991) provided some illumination on the potential application of research by stating, "[research] is the gathering of knowledge – more usually, not for its own sake, but for

its use within a variety of different applications" (p. 13). Stokes (1985) identified possible beneficiaries of research and suggested there "should be more specific aims and objectives in Māori research which are directed at helping people in their daily lives" (p. 3). Te Awekotuku (1991) asserted, "It is also vital that the knowledge gained from research benefits the community" (p. 13). Bevan-Brown (1999) placed high priority on the utility of research to the Māori community by incorporating this sentiment into her 'top ten components of Māori research'. She proposed:

> Māori research should result in some positive outcome for Māori. This may be manifest in many different ways e.g. improved services, increased knowledge, health gains or more effective use of resources. Whatever the form Māori research should benefit Māori in some way (p. 235).

While describing the retention, transmission, and development of old and new knowledge as a strategic goal for Māori research, Durie (1999) stated the underlying assumption that knowledge is not static and that "new knowledge will increase at rates which cannot yet be comprehended and that technology will bring a whole new approach to knowledge" (p. 411). Durie also pointed out that old knowledge and new knowledge must go 'hand in hand' to enable adaptation to the modern context. Furthermore, while delivering the 1998 Millennium Lecture during *Te Oru Rangahau*, Chief Judge Edward Durie observed that Māori custom has not constrained Māori adaptation (Durie, E., 1999).

A Code of Ethics

Māori are not satisfied with current ethical mechanisms. Walsh-Tapiata (1999) highlighted some of the differences between ethics committees' access-granting mechanisms and those of iwi. During his Millennium Lecture, Chief Judge Durie proposed that a code of ethics should be formulated to guide Māori research. In a similar vein, Te Rōpu Rangahau Hauora Māori o Ngai Tahu (1999) recommended that a National Māori Ethics Committee be established to complement other ethical bodies already in place.

A central ethical issue is the nature and management of the relationship between the researcher(s) and researched. Within this issue there are three interwoven concerns: first, the question of control; second, the power relationships between researchers and researched; third, the arrangements for benefits resulting from research.

Control is significant in that Māori seek to have some form of control over the way research is carried out and ultimately, the use of the information generated through the research (Cram, 2002). Control is a particularly important issue when the researcher is from outside the research participant group. Soutar (1996) and Walsh-Tapiata (1999), however, noted that membership of an iwi by no means guarantees access to that group's information.

The power relationships between the researcher and participant groups are equally important. Harmsworth (2001, p. 6) summarised that "credible relationships take a long time to build, but are critical to successful...research". Te Awekotuku (1991) commented that social scientists are becoming more answerable to the social groups they study. Furthermore, Smith (1992) stated that:

> The task ahead for all educational researchers...is to develop appropriate 'powersharing' models which give Maori people autonomy over the whole research enterprise – from the formulation of questions which they want answered to being able to influence what the research should be ultimately used for (p. 6).

Agreement between external researchers and Māori groups as to who will benefit from research needs to be reached before research begins (Walsh-Tapiata, 1999; Durie, A., 1999). This includes the rights to any intellectual property that is generated as a result of the research. By virtue of these arrangements, Māori accept that there should be some benefit to external researchers as a result of their work with Māori.

National Focus for Māori Research and Development

The national Māori ethics committee suggested by Te Rōpu Rangahau Hauora o Ngai Tahu (1999) could provide some degree of national level focus in the area of ethics. In terms of funding, Margaret Mutu (1999, p. 53) asserted, "There remains a desperate need for the resourcing of Māori research to be determined and conducted from within a Māori defined framework". Durie (1999c) proposed an approach that encompasses both issues, a national-level Māori Foundation for Research and Development. One of the main rationales for the Foundation was the opportunity for effective Māori leadership in the field of research.

The proposed functions of the Foundation were identified as: purchasing research relevant to Māori advancement; liaison with agencies involved in research; provision of leadership in ethical matters; and the active encouragement of research that would add value to Māori development.

At a philosophical level, the Foundation proposed at *Te Oru Rangahau* was to provide an environment to facilitate research that was "...grounded in those aspects of knowledge and research that make sense to Māori..." (Durie, 1999c, p. 412).

Generation of Evidence-based Policies and Practices

Research has the potential to provide empirical evidence for Māori development policies and practices (Durie, 1999c) both in terms of Government and Māori initiatives. In terms of Māori use of empirical evidence, Stokes (1985) stated:

> The ... function of Māori research is to direct efforts in investigating ways in which Māori resources – cultural, economic and social – can be used more positively and effectively, to work through institutional barriers, to provide avenues of guidance, set out options and communicate these in such a way that Māori people themselves can work through the issues that confront and concern them (p. 6).

Results from research must be presented in an appropriate way for the intended audience. For example, research findings from a study of economic implications on Māori employment would be presented to a community provider group in a different form to the report presented to Treasury. In summary "Results of research are of little use if they are not made available to form part of the knowledge base of the people and to help them make decisions" (Mutu, 1999, p. 51).

Analysis based on Māori Frameworks

Related to the notion of control and power relations is the concept of analysis based on Māori frameworks. Writers have highlighted the inadequacies of imposed Western frameworks to conduct research involving Māori issues. Instead, Māori aspire to carry out research more consistent with their priorities, their realities and their worldview – a viewpoint consistent with the aspirations of indigenous people the world over (Durie, 2002b). Two important constituents of research that take account of the Māori worldview are the notions of Māori identity and Māori diversity.

Stokes (1985) went so far as to say that:

> ...the purpose of Māori research should be to identify and make available knowledge of the Māori world, Māori perspectives and perception, Māori cultural values and attitudes in areas which are seen as significant in Māori terms. It can not be assumed that that there is a uniform Māori view... (p. 6).

Māori have developed frameworks where Māori worldviews, and in particular identity and diversity, are taken into account, one example being the Te Hoe Nuku Roa Framework (Te Hoe Nuku Roa Research Team, 1999).

Human Resource Development

For Māori aspirations for research to be met, concerted effort is required to up skill the Māori research workforce. This can be achieved in a number of ways. Community-based Māori with little prior 'formal' research experience can be introduced into the RS&T workforce by way of involvement to carry out fieldwork (Harmsworth, 2001; Ratima, 2001; Tuhiwai-Smith, 1999). Following on from that is the potential for formal training at tertiary institutions, including wānanga and universities. Tuhiwai-Smith (1999) outlined the benefits of tertiary institutions as training places for Māori researchers where these institutions can "offer the programmes, resources, facilities, and structures which can if the conditions are appropriate, support and train indigenous researchers" (p. 134). Besides Māori carrying out the actual research work, more managers and decision makers in key positions in the RS&T are needed (Walker, 1997). Lomax (1998) took the view that more needs to be done to encourage Māori to enter the disciplines of science and technology while still at school to address their low representation in the science professions.

Alliances between Disciplines, Sectors, and Institutions

Over the years a variety of Māori researchers have called for more co-ordination within their respective sectors (see New Zealand Council for Educational Research, 2000; Te Rōpu Rangahau Hauora a Eru Pōmare, 1996). Durie (1999c) echoed those sentiments and calls from earlier speakers at *Te Oru Rangahau* that a higher level of co-ordination was required in Māori development efforts, not just within sectors but at multiple levels, within and between disciplines, sectors and individual institutions. This approach could be conceptualised as vertical coordination (within a discipline, sector or institution) and horizontal coordination (between disciplines, sectors or institutions).

The enhanced coordination gained by such alliances would be beneficial in two ways: it would enable holistic, multidisciplinary approaches to Māori development, and it would avoid unnecessary duplication of effort (Walker, 1992). Furthermore, a medium for stimulating information flows and educating people within and between indigenous communities could foster international alliances (Tuhiwai-Smith, 1999). In summary, these alliances hold much promise for an increased level of synergy in Māori development action.

Use of Multiple Methodologies

Walker (1992) considered the lack of success of a great deal of research involving Māori was because it was carried out using a 'Pākehā cultural framework'. In a similar way Durie (1999c) asserted that the broad domains of Māori development demand the use of multiple approaches. Other cultural frameworks therefore need to be incorporated into research methodologies (Stokes, 1985).

Other such frameworks or methodologies need not only be sourced from Māori or the dominant Western paradigm, rather they could include complimentary approaches that derived from Māori, Western, non-Māori indigenous or other groups. The use of multiple methodologies in Māori specific research can help the Māori development project. The challenge lies in ensuring those methodologies and approaches are designed and carried out in a way consistent with Māori values.

The Key Māori Aspirations for Research

A number of reoccurring themes run through the eight strategic goals for Māori research identified by Durie (1999c). The Māori worldview and values should underpin all Māori research efforts. Māori identity and diversity are paramount in research design and practice. The research carried out must produce some benefit to Māori, whether that is through better co-ordinated Māori development efforts, improved policies and practice or an increased Māori research workforce capacity (a positive Māori development outcome in its own right). These aspirations do not relegate Māori to an insular mode of operation. Rather, incorporation of other approaches to research are encouraged, but not at the expense of the underpinning Māori values.

In recent years efforts have been made within New Zealand's RS&T sector to address Māori aspirations for research.

Māori Specific Research within the contemporary RS&T Sector

In the early years of New Zealand's RS&T sector, Māori were marginalised as 'objects' of research (Tuhiwai-Smith, 1999). It has been suggested the exclusion of Māori from meaningful roles in the sector was by design rather than coincidence. Walker (1997) asserts it was a consequence of colonisation that "has seen Māori excluded from many areas of activity, including participation in science and the benefits that science brings to society" (p.1).

Despite this exclusion, some Māori-specific research projects were undertaken. Research included various projects published in the *Transactions and Proceedings of the New Zealand Institute*, the *Journal of the Polynesian Society* and similar academic fora, policy motivated research such as the Hunn Report (1961) and the Māori Woman's Welfare League health report *Rapuora* (1984). These initiatives were sporadic, a symptom of the ad hoc approach to Māori research of the time. Furthermore, the outcomes produced by the projects were variable. *Rapuora* was perceived as a seminal piece of work (Durie et al., 2002), while the NZCER report on Māori language was exemplified as merely descriptive and lacking solutions to identified problems (Stokes, 1985).

As was the case with New Zealand public policy in general, the precursor to the significant increase in Māori-specific initiatives in the contemporary RS&T sector was the State's increased recognition of the Treaty of Waitangi. The acknowledgment of the importance of the Treaty was formalised through the passing of the Treaty of Waitangi Act 1975 (and subsequent amendments) and the development of Treaty of Waitangi Principles by various State bodies.

However, it has been noted that Māori views and experiences have not always been easily addressed in the contemporary RS&T sector (Cunningham, 1999a). To facilitate the analysis of publicly funded Māori specific research efforts within the contemporary RS&T sector, the main components of the sector identified earlier are used: policy making, purchasing and provision.

Māori specific research policy making

There is one organisation vested with undertaking Crown policy making in the RS&T sector, the Ministry of Research, Science and Technology.

Ministry of Research, Science and Technology

The Ministry of Science, Research and Technology was established in 1989 as the Crown's primary policy advisor on RS&T. Its main brief was to provide policy advice on priorities and funding levels for publicly funded science and science-related legislation, the Ministry was also responsible for overseeing funding within Vote RS&T and for maintaining Government-to-Government science agreements (MoRST, 1996).

In late 1992, MoRST convened a one day hui to address key issues regarding Māori and RS&T. The areas that required work were identified as how best to consult with Māori,

Māori access to the science system, and how the RS&T system catered for and related to mātauranga Māori. As a result of the hui, MoRST made a commitment to establish a Māori advisory body, address barriers to Māori participation in the RS&T sector, explore the feasibility of a separate Māori science agency, and work in conjunction with Te Puni Kōkiri to attend to Māori concerns about mātauranga Māori (MoRST, 1992). None of the issues raised at *Hui Tikanga Putaiao* were particularly novel, many reflected long-held Māori views on the public RS&T system. Nearly 10 years earlier Stokes (1985) had stated, "Māori research is a necessary activity which requires government encouragement and support, and is to be incorporated in the formulation of policy on research activity" (p. 3).

In the mid to late-1990s attempts were made by the RS&T sector to cater for Māori aspirations. Two key initiatives were introduced in *The Blueprint for Change* document. The first was the inclusion of 'Māori development' as one of the 14 target outcomes that fed into the high-level science envelope goals. The second was to incorporate 'Responsiveness to Māori' as one of the 10 stewardship expectations identified in the *Blueprint.*

The target outcomes identified in *The Blueprint for Change* were deliberately relevant across sectors, the aim being to encourage providers to rise above their specific interests and recognise shared national needs (MoRST, 1999a). The Māori development target outcome statement read "Māori achieve well-being, self sufficiency, prosperity, equity justice and political effectiveness" (MoRST, 1999a, p. 24).

The 10 explicit stewardship expectations relate to the mechanisms for allocating resources to RS&T activities within the science envelope. The aim was for purchase agents to be held accountable by MoRST for their stewardship of these mechanisms (MoRST, 1999a). Progress (in part, at least) has been made towards the stewardship expectation of responsiveness to Māori. In February 2002 a paper was prepared for MoRST that "...describes in greater detail what is meant by this expectation [responsiveness to Māori] ..." (Cunningham, 2002, p. 1).

The Ministry's effectiveness in catering for Māori aspirations in the RS&T sector is debatable. Recent progress, including the Māori-specific target outcome and the stated commitment to facilitate responsiveness to Māori, are positive. However, long-standing issues remain unresolved. In 2002, following the General Election, MoRST produced its briefing to the incoming Minister of RS&T. In this document, under a section headed 'responsiveness to Māori', MoRST (2002d) states:

Recent regional hui with Maori and the science sector have made it clear that further policy work needs to be undertaken to increase Maori participation in RS&T. Areas for future work include:

- developing meaningful partnerships and collaborations between iwi / Maori and research groups;
- building Māori capacity and capability to actively participate;
- recognising matauranga Māori as a valid knowledge system (p. 12).

These issues bear a strong resemblance to the key issues raised at *Hui Tikanga Putaiao* in 1992, nearly 10 years earlier. It could therefore be concluded that little real progress has been made by MoRST between 1992 and 2002.

Māori specific research purchasing

There are three main public bodies that specialise in RS&T purchasing in New Zealand: The Foundation for Research Science and Technology, the Health Research Council of New Zealand, and the Royal Society of New Zealand.

Foundation for Research, Science and Technology

The Foundation for Research Science and Technology (FRST) was formally established in 1990, and is by far the largest Government purchaser of RS&T (FRST, 2002a). The Foundation's chief function is to purchase research in accordance with national priorities; it also provides some policy advice to the Minister of RS&T (MoRST, 1996).

An example of the Foundation purchasing RS&T in line with national priorities was the alignment of its purchasing portfolios with the 14 Target Outcome areas identified in *The Blueprint for Change.*

The Target Outcomes provided the basis for the development of FRST's Strategic Portfolio Outlines (SPO) Framework. This Framework consists of 27 SPOs arranged into five inter-related groupings. Significantly, one of the five groupings is Māori Development and Advancement.

Besides the high-level Māori Development and Advancement SPO grouping, the Foundation has stated objectives to be responsive to Māori, which is consistent with MoRST's

stewardship expectation of Responsiveness to Māori. FRST concentrates its Māori responsiveness in two ways: through its Māori Development and Advancement output class (i.e. RS&T that focuses specifically on Māori outcomes); and through other output classes as 'strategic balance factors', (i.e. RS&T that will contribute to Māori outcomes in other ways) (FRST, 2002a).

It is apparent that FRST has made considerable progress in its responsiveness to Māori. There is a framework for how that responsiveness is to be achieved. Quantitative funding targets have been set for its investment portfolios for Māori-specific research, and assessment criteria have been developed (FRST, 2002b). Furthermore, Morten, (2002) reports that Māori development and advancement is one of the Foundation's operating principles, so is explicitly considered in all its output classes. However, even with this significant progress, at a fundamental level FORST must remain consistent with Western scientific approaches and cannot adequately cater for Māori world-views (Durie, 2003). The New Zealand Institute of Economic Research (2003) was concerned that "...the bulk of the [FRST's] purchasing structure is oriented toward an existing scientific research community, with its own interests and approaches" (p. 77).

Health Research Council of New Zealand

The Health Research Council of New Zealand (HRC) was established under the Health Research Council Act 1990 and is the main publicly funded organisation responsible for purchasing and coordinating health research. The HRC is funded through MoRST and is accountable to MoRST and the Ministry of Health. The aim of the HRC is to improve human health by promoting and funding health research (HRC, 1998).

The Council purchases a range of health research, including biomedical, clinical, public health, health services, Māori and Pacific research. The establishment of two Māori health research units in 1993 provided a location for the development of the Māori health research workforce along with the other aims of providing Māori specific health research centres.

Largely as a result of work by the late Eru Pōmare, the Māori Health Committee of the HRC has been in operation since its establishment. Initially, the Māori Health Committee served as an advisory body but in 1995 it was vested with the same powers to manage research funds as the HRC's Bio-Medical and Public Health Committees. By 2000, all funding proposals to the HRC were required to demonstrate some level of responsiveness to Māori. In 2001 the HRC, like FRST, established a portfolio investment system. One of the nine

portfolios created was Rangahau Hauora Māori, which provides the focus for HRC's Māori specific research (Scoggins and Cunningham, 2001).

One of the strengths of the HRC in terms of its responsiveness to Māori has been its Māori workforce development programme. There is a variety of mechanisms to support Māori capacity building in the tertiary sector from undergraduate to post-doctorate levels. In 1991 the HRC had no formal investment in training awards for Māori. By 2001 six HRC supported candidates were expected to graduate from doctoral programmes, with a further 20 enrolled in PhD programmes (Scoggins and Cunningham, 2001).

Royal Society of New Zealand

The Royal Society Of New Zealand (RSNZ) purchases a smaller proportion of New Zealand's public RS&T. The main funds it administers are the Marsden Fund for fundamental research and, more recently, the Centre for Research Excellence (CORE) fund. There is little evidence to suggest that the Royal Society has a comprehensive approach to Māori specific initiatives at a strategic level, though it is important to note that some measures have been put into place to facilitate Māori responsiveness. For instance, the application process for the 2003 Marsden Fund has introduced a section on Responsiveness to Māori (Royal Society of New Zealand, 2003). Furthermore, the Society is currently building a relationship with the National Association of Māori Mathematicians Scientists and Technologists (NAMMSAT). At this stage, the nature of the relationship is unclear but it includes the provision of office space at the Society's offices in Wellington. Finally, one of the five initially funded CORE's was *Nga Pae o te Maramatanga, The National Institute of Research Excellence for Māori Development and Advancement*, based at Auckland University, although it is unclear whether the funding of that CORE was as a result of some explicit policy regarding responsiveness to Māori.

As noted above various government departments undertake research to support their activities. In many cases research providers external to those government departments are commissioned to carry out this research. Te Puni Kōkiri (The Ministry of Māori Development), and The Ministry of Education are two government departments that commission a substantial amount of Māori specific research in this manner.

Māori specific research provision

Many research providers undertake some form Māori specific research. The two main groups of providers in New Zealand are the CRIs and universities. Generally the CRIs' and

universities' Māori specific research activities make up a small proportion of their total work programme. However, a number of research units based in New Zealand universities focus heavily or exclusively on Māori specific research.

Crown Research Institutes

In 2002, MoRST and the Crown Company Monitoring Advisory Unit (CCMAU) carried out an appraisal of the CRIs. While not being a formal evaluation of their performance, the appraisal did find the CRIs had "done the job that was expected of them over the last ten years" (MoRST, 2002a, p. 4). The appraisal also noted the CRIs had achieved well in a difficult environment where they must balance the requirements of running as a business while adhering to the Crown Research Institutes Act 1992 by exhibiting a sense of social responsibility and undertaking research for the benefit of New Zealand (MoRST, 2002a).

Section 5.4(d) of the Act states CRIs must recognise the aims and aspirations of Māori, the employment requirements of Māori, and the need for greater involvement of Māori as employees of CRIs (Lomax, 1998). While MoRST's 2002 appraisal does not explicitly assess the CRIs' performance in Māori specific research it does indicate the performance of the nine CRIs in responding to this section of the Act has been variable.

Two CRIs in particular have made significant progress. Manaaki Whenua (Landcare Research) created a high-level Māori specific management position as Treaty Responsibilities Manager, and has undertaken several major collaborative research projects with Māori groups (Harmsworth, 2001). NIWA (National Institute for Water and Atmospheric Research) established a Māori specific research unit within the organisation. NIWA have also set up formal agreements with 48 different Māori groups, including 10 signed memoranda of understanding (MoRST, 2002a).

Other CRIs have undertaken some initiatives such as building links with research users and offering scholarships to Māori university students, and a stated commitment by some to increase their Māori workforce especially into senior positions (MoRST, 2002a). The CRIs are the largest providers of science research in New Zealand (Association for Crown Research Institutes, 2002). The apparent piecemeal performance of the CRIs in providing Māori specific research is therefore of concern.

Universities

Research currently carried out at New Zealand universities is generally funded either 'externally' (by research purchasers including FRST, HRC and the Royal Society), or 'internally' by the Ministry of Education (as part the Vote Education). Until now the internal research funding from the Ministry of Education has been linked to enrolment numbers of equivalent full time students (EFTS). However, the tertiary education sector is currently undergoing major reforms. A Performance-Based Research Fund will replace the EFTS research funding system. The recently established Tertiary Education Commission (TEC) will administer the Fund (Tertiary Education Commission, 2003).

As noted earlier, there are a number of Māori specific research centres based in various universities around the country. Four centres are based at the University of Auckland, two at the University of Waikato, two at Massey University and two at the University of Otago.

The University of Auckland hosts the *James Henare Māori Research Centre, The International Institute for Māori and Indigenous Education (IRI), Toimaiora,* and, *Nga Pae o te Maramatanga* Centre for Research Excellence.

The James Henare Māori Research Centre, named after a widely respected leader from the Nga Puhi tribe of North Auckland, was established in 1993. The unit carries out social research with particular relevance to Nga Puhi and to urban-based Māori from the Auckland area (James Henare Māori Research Centre, 2003). *IRI* focuses on Māori and indigenous education, but its aims include undertaking research, providing policy analysis and strategic planning advice related to Māori development, generally (The International Institute for Māori and Indigenous Education, 2001). *Toimaiora,* established with funding from the HRC in 1998, carries out research in the area of the health and well-being of Māori children and youth. It is situated within the Department of Māori and Pacific Health (Toimaiora, 2002). *Nga Pae o te Maramatanga, the National Institute of Research Excellence for Māori development and advancement* was established as one of the initial five Centres of Research Excellence. Its main areas of research are education, health and science (Royal Society of New Zealand, 2002).

The Māori and Psychology Research Group and *Te Mātāhauariki* are based at the University of Waikato. The first group has published on a variety of Māori mental health and related issues (Māori and Psychology Research Unit, 2003). The purpose of *Te Mātāhauariki Research Institute* is to "consider ways in which the legal system of Aotearoa/New Zealand might

better reflect the values and concepts of the country's two major cultures". *Te Mātāhauariki* is funded by FRST.

Massey University is the base for two Māori specific research centres. *The Centre for Social and Health Outcomes Research and Evaluation (SHORE)* contains the Māori-centred *Whariki* research group (formally part of the Alcohol and Public Health Research Group at the University of Auckland). *SHORE* receives funding through external research grants, and largely through Whariki, contracts to undertake research pertaining to a wide variety of Māori development issues (Centre for Social and Health Outcomes Research and Evaluation, 2002). Massey's second Māori specific research presence is at Te Pūtahi-ā-Toi, the School of Māori Studies. Three major research programmes have been initiated within the School. *Te Hoe Nuku Roa* is a longitudinal study examining the effects of Government policies at the Māori household level. *Te Pūmanawa Hauora* is an externally funded Māori health research unit. *Toi te Kupu* is concerned with the revitalisation and development of Māori language. All three of these research programmes secure funding from a variety of external sources including FORST and the HRC (Te Pūtahi-ā-Toi, 2002).

The two major Māori specific research activities based at the University of Otago are the *Māori Health Research Unit* and the *Te Roopu Rangahau Hauora a Eru Pōmare, The Eru Pōmare Māori Health Research Centre.* The *Māori Health Research Unit* was established in 1995 as a partnership between Ngai Tahu and The University of Otago. The main funders at that time were Ngai Tahu Development, the HRC and the University of Otago (J. Broughton, personal communication, February 27, 2003). *Te Roopu Rangahau Hauora a Eru Pōmare* was renamed after the late Eru Pomare, the inaugural director of the Unit. This Unit was one of the two Māori health research units funded by the HRC in 1993.

In summary, there are four common characteristics among the university-based Māori-specific research providers identified. First, the trend is towards external funding by HRC, FRST or other parties, and it should be noted that the establishment costs of these units have been largely borne by the external organisations. This begs the question: how are the host institutions, the universities, contributing? Second, there is a strong bias toward social science research, particularly health and education. There is a complete absence of a Māori specific science or technical research centre, which would be consistent with the current Government drive toward the global knowledge society. Third, the providers use mixed methodologies. Recalling Cunningham's taxonomy of Māori research (see Chapter Two),

they employ a combination of methodologies ranging from research involving Māori through Māori-centred research to kaupapa Māori research. Fourth, the combination approach adopted by the providers highlights the absence of a mātauranga Māori dedicated Māori specific research provider. Such a provider would specialise in mātauranga Māori-based research and would provide a focal point for its development and articulation.

Treaty of Waitangi Claims Research

A significant area of Māori specific research that does not neatly fit within the policy/purchaser/provider schema is the research funded and undertaken to provide evidence for Treaty of Waitangi claims against the Crown. The key organisations in the area of Treaty of Waitangi claims research are the claimants, contract researchers, academics, the Waitangi Tribunal, The Crown Forest Rental Trust, and the Office of Treaty Settlements. Together these groups form an array of research policy makers, purchasers and providers.

The body of research generated to substantiate Treaty of Waitangi settlements is enormous. It has been reported that by the end of 2001 around 970 claims had been filed with the Tribunal, 120 of which have been resolved, and an unknown number withdrawn (Maling, 2001). Of the claims that have been heard, entire tribal histories were reviewed and documented. Extensive analysis and cross referencing of Māori Land Court records and archival material has also been undertaken. Series of oral history projects to record elders' recollections of past events and the on-going effects of the alleged breeches of the Treaty were also carried out (Smith, 1999).

Had it not been for the historical research carried out to inform Waitangi Tribunal claims, substantial parts of iwi histories would have been lost through the passing of elders, or would at least have remained silent in various archives. The restorative and healing process of rediscovering Māori histories has no doubt been beneficial for the groups concerned. Further, Treaty of Waitangi claims led to an increase in Māori community involvement in research. In addition to this are the economic gains that have been secured through those claims that have reached settlement (Durie, 1998; Smith, 1999; Soutar, 1996).

Summary

Māori remain concerned that their aspirations for Māori development research are not fully reflected in mainstream approaches to research policy, purchasing and provision, despite recent changes such as new approaches reflected in policy and purchasing mechanisms.

It is illuminating to note the reaction of the various stakeholders in the RS&T sector to the Māori Development Target Outcome and the Stewardship Expectation identified by MoRST in *The Blueprint for Change*. FRST made major adjustments by way of creating separate research portfolios and requiring purchasers to illustrate responsiveness to Māori. However, to date the same cannot be said for the CRIs. This is perhaps due to the limited scope provided for Māori-specific initiatives in the CRI Act 1992. The appraisal carried out by MoRST in 2002 found that generally the CRIs had performed well in terms of the Act. However, it appears that in so far as they consider the issues, CRIs are addressing their responsiveness to Māori in an ad hoc fashion.

The HRC on the other hand was more proactive: it funded two Māori specific health research units in 1993, its Māori Health Committee was vested with similar powers to the Bio-Medical and Public Health Committees, and its Māori health research workforce development programme was increasing Māori health research capacity.

At least two significant fora have called for the establishment of a separate organisation to manage publicly funded Māori specific RS&T. The first was *Hui Tikanga Putaiao* in 1992. The sentiment was repeated as one of the key recommendations made at the conclusion of the *Te Oru Rangahau* Conference in 1998. The Government did not adopt the concept of a stand-alone body. However, some recognition was given to the aspirations for a focal point for Māori specific research articulated at *Hui Tikanga Putaiao* and *Te Oru Rangahau* with the inclusion of Māori Development and Advancement as one of five high level strategic Portfolio Outline Groups in the FRST funding mechanisms and the establishment of a Māori Standing Committee (with a funding role) in the HRC.

Recent measures within the RS&T sector, while representing a significant advance in terms of the public sector approach to Māori specific research have not been sufficient to address fully Māori aspirations for Māori development research. The major area of deficiency relates to the capacity of mainstream policy-makers, purchasers and providers to grapple with the challenges of research that is located within a Māori worldview. Furthermore, it is questionable whether current arrangements within New Zealand's RS&T sector can adequately address the tensions that exist between Māori knowledge systems and the dominant science paradigm. A case in point is MoRST's unfortunate restating that recognition of mātauranga Māori was needed over 10 years after participants at Hui Tikanga Putaiao had identified the issue as requiring attention.

An important contribution to further enhancing the responsiveness of the sector to Māori, would be to develop a tool that can better enable the sector, in particular the policy making, purchasing and provider arms, to measure its contribution to Māori development.

CHAPTER FIVE

SURVEY FINDINGS

'...E rongo rānei i ngā tohe a Pōtoru...[8]

Introduction

This chapter summarises the findings from the qualitative survey of experts. First, the characteristics of the survey participants are briefly revisited. And second, participants views are grouped according to nine categories based on the structure of the survey questionnaire: Māori development; Māori development principles; links between Māori development and research; the purpose of research involving Māori; the principles of research that will contribute to Māori development; assessing the contribution of research to Māori development; the benefits of research involving Māori; key issues in research involving Māori; the relationship between researchers and research participants; and links between research involving Māori and research outside of New Zealand.

Under each of these categories, the key themes that have emerged from participants' comments are identified and are linked to supporting quotes.

The Sample

Four individuals were interviewed for the survey. Using purposeful sampling they were selected on the basis that each worked in a different sector of the Māori research community. Research Participant One was a full-time researcher within a Crown Research Institute. Participant Two was a rural community-based Māori researcher. Participant Three was a member of the governing body of a major research purchaser within New Zealand. Participant Four was a Māori health programme developer involved in numerous research projects. All the participants were of Māori descent.

[8] '...Have you not heard of how obstinate Pōtoru was...' An excerpt from *Poua*, a traditional waiata tangi from Aotea waka. It recounts the destiny of Pōtoru, who, during the Aotea voyage from Hawaiki to Aotearoa, disagreed with the consensus and took an alternative route. He was lost at sea. An interpretation is that one should not be introverted (obstinate) but should base one's point of view on multiple sources of information.

Findings

Māori Development

It was clear from all interviewees that Māori development is not the province of selected organisations or groups, but is relevant to all Māori in a range of situations. It concerns the past as well as the present, and is about affirming Māori values while taking into account the needs of future generations. Māori development activities should also contribute to enabling Māori to participate in wider society as well as Māori society.

> "Māori development for me is a very important part of whatever stage we are in our lifetime, for me it's important that we have cognisance of where we live, where we come from, who we are, our whakapapa and look to see what has happened...Māori development encompasses the whakapapa of a person as well as the spirituality and the cultural and the security for the future, that's why, because security can be money, land, as a Māori, we'll always want to be sure that in our time, that whatever we do to promote development is going to be passed on to the next generation." (Participant 4)

> "...I see development very much in terms of looking back in time as well and learning from the past and reflecting from the past and then also looking to the future." (Participant 1)

> "...we belong to iwi here in Taranaki who are in the unenviable position of being trapped by the legacy of muru raupatu, whereas other tribes just get down to the business of establishing organisations that are going to carry out a certain function...the whole idea of development seems quite removed....So for me development for Taranaki is firstly some inquiry and analysis of why we are the way we are and what are the strengths that we've got...and where is the base of people...that would give cohesion and alignment." (Participant 2)

Participants gave strong indication that Māori development ought not to be positioned in the past. While over time the types of development activities carried out might change, from their perspectives the focus should remain on providing a secure future. Put another way, Māori development should contribute to enhancing the capacity of Māori to adapt to a changing world in order to achieve a secure future for Māori. Further, Māori development

was not seen as a short-term endeavour, but rather a long term ongoing strategy to facilitate Māori aspirations.

> "Well, if we look at Māori development, say in my grandparents' time, because they were Māori tuturu, and their development process was mainly in how they could utilise the land, how they could better themselves...so there were those things that they wrapped around that term development, and probably in my day, or my parents' day, it was just a continuation of that, in building a process that the family would be secure for the future." (Participant 4)

> "...when I think of Māori development I often think in terms of time frames of 5 years to 10 years to 25 years to 100 years." (Participant 1)

There was consensus among interviewees that the notion of advancement is central to the concept of Māori development. Advancement is concerned with making positive progress in a broad sense to improve the position of Māori in society. It should address economic, cultural, social, political and spiritual goals. Further, advancement should be positive and directed towards clearly defined objectives, rather than be driven solely by ad hoc and opportunistic initiatives.

> "...advancement, enrichment, progress in a number of areas not just economic but also cultural, social, spiritual...going forward...trying to reach aspirations to achieve some type of vision...Politics is definitely up there, politics provide a government structure in a constitutional framework that people work within to achieve tino rangatiratanga..." (Participant 1).

> "...the main requirement, if there's going to be development, is that there needs to be a vision..." (Participant 2)

The concept of empowerment, that is, increasing Māori control over the factors that determine Māori futures, was identified as central to Māori development. According to interviewees, Māori futures should not be shaped by random circumstances, but rather by the considered agenda and initiatives of Māori.

"...development is often something very similar to tino rangatiratanga...some form of self determination...or aspiring to something where their life is under their control...or they feel more independent than having to rely on everything around them and be affected by everything that goes on around them...trying to achieve something for yourself and have your own life under your own control..." (Participant 1)

"...specifically it's about Māori autonomy and control, about progressing a Māori agenda." (Participant 3)

Comments indicated that Māori development is primarily a collective endeavour, and that regardless of circumstances all Māori should have opportunities to engage in multiple strategies to achieve broad goals. Further, all Māori should benefit from the impact of Māori development activities.

"...the first thing that is needed for development is a will on the part of individuals and groups to actually commit themselves to the bigger picture and to allow some cohesion and alignment to begin to happen." (Participant 2)

"...it's about improving Māori outcomes...it shouldn't rule anything or anybody out...I use a definition of Māori development that puts emphasis on not ruling out options or pathways or people...it's pluralistic taking account of the fact that there's more than one way of thinking..." (Participant 3)

In summary, the main elements identified by participants as underpinning the concept of Māori development are that it should contribute to Māori empowerment and advancement, there should be tangible benefits all Māori both now and in the future, initiatives should include a focus on increasing Māori human and physical capital, distinctly Māori beliefs and values should be affirmed, and the capacity of Māori to adapt to change should be enhanced.

Māori Development Principles

Māori identity was an important principle identified by interviewees. The implication of the Māori identity principle is that uniquely Māori elements should underpin approaches to Māori development. At the very least, Māori development should be consistent with Māori cultural beliefs and values and should strengthen Māori cultural integrity.

"...my approach now is that we should always turn back to history, to look at how our people left a legacy in place for us to belong to and to add to...that means understanding the whakapapa, it means ground work, it means developing means of giving out whakapapa to various people so that its disseminated, and it means also in terms of the language that the history through the reo and waiata and karakia again is going out..." (Participant 2)

"...Māori development must encompass the spirituality, the cultural and the whakapapa..." (Participant 4)

"...a lot of my principles are obviously based on Māori values...principles come through in terms of kotahitanga, in terms of whakapapa, in terms of mana whenua and in terms of iwitanga." (Participant 1)

The principle of adaptation was strongly emphasised by interviewees. It was noted that Māori development should achieve a balance between reflection on past experience and future aims. In achieving this balance it is important to acknowledge that Māori have a living and evolving culture. While maintaining many relevant customary beliefs and values, it is capable of embracing change in order to progress in contemporary times.

"...a balance of looking forward and back...it's important to acknowledge and respect traditional culture, but not be enslaved by it...without colonisation we would have still moved on...technology has changed us, but so too would our own beliefs..."(Participant 3)

Diversity was identified as a key Māori development principle, relevant both to the multiple lifestyles of Māori and the range of strategies that should be employed to enable the greatest possible scope for positive development.

"...the number one thing is that it [Māori development] should be deliberately broad so that nothing is ruled out...this must be purposeful and inclusive..." (Participant 2)

"...it [Māori development] shouldn't rule out anything or anybody..." (Participant 3)

Diversity had a wide variety of parameters including geography, politics, lifestyle or age. In the globalised context it is particularly concerned with strengthening the links between iwi

and their members who live outside of tribal boundaries both within and outside New Zealand.

> "...creating the reclamation of the tribe, that means reaching out to far flung places to recall the uri...going out to re-empower people and to reclaim them, to reclaim their belonging to us as a tribe..." (Participant 2)

Empowerment was also identified as a Māori development principle.

> "...going out to re-empower people..." (Participant 2)

> "To actually achieve what you aspire to achieve..." (Participant 1)

> "...we have been well informed, and it's got nothing to do with hereditary chiefs at all, it's got to do with being empowered through being well informed." (Participant 2)

According to many participants' comments Māori development is based on the dual principles of individual and collective benefit. Māori development is also concerned with improving the situations of individual Māori and the circumstances of Māori collectives. It was noted that individual and collective focuses are not mutually exclusive.

> "...developing as a personal thing, as well as a hapū, tribe..." (Participant 4)

> "...Māori development is...having the capabilities either at an individual level or at a group or community level...whether it is human capacity or social capacity." (Participant 1)

> "...individual versus group good...contemporary New Zealand is more individualistic than in the past...but the individual emphasis and the collective emphasis don't have to be mutually exclusive..." (Participant 3)

In further developing the notion of collective benefit, the principle of synergy can be derived from participants' comments. Collective action should be co-ordinated to ensure the best use of limited Māori capacity and resources.

"...uniting factor, a stabilising factor, that gives assurance and certainty that fosters, creates and secures alignment and cohesion..." (Participant 2)

Capacity building was identified as another Māori development principle that acknowledges the marginalised position of Māori and the need to build human skills and competencies, both for individuals and for groups.

"...Māori development is actually capacity building, is having the capabilities either at an individual level or at a group or community level..." (Participant 1)

The key principles of Māori development identified by interviewees were: Māori identity; adaptation; relationship building; diversity; empowerment; individual benefit; collective benefit; synergy; and capacity building.

Links between Māori Development and Research

All interviewees agreed that there is a strong link between Māori development and research, and that sound research should not only inform but also underpin Māori development.

"...research is the tool you need to progress development..." (Participant 3)

"...research...becomes quite fundamental to underpinning development..." (Participant 1)

New knowledge was identified as the explicit link between research and Māori development. From the perspective of interviewees, knowledge generation through research provides the foundation for Māori development.

"There is a relationship between knowledge and development, and a relationship between research and knowledge. So, development is related to research through knowledge....Research is the activity or discipline that turns information and data into knowledge...knowledge is power....In the absence of knowledge, development won't proceed..." (Participant 3)

"...if we don't enquire, or if we don't arm ourselves with all the possible information, we're not really going to be well informed, and so I think that research is a key ingredient to building an information base and knowledge base." (Participant 2)

"...we should really be asking ourselves right through Māoridom at the moment how do we take advantage of this whole knowledge economy which is an integral part of development in future, and what does it really mean to Māori and have we the capacity at the moment to actually get on board that knowledge wave..." (Participant 1)

According to participants, research should not drive Māori development and therefore set the Māori development agenda, but it should contribute by providing knowledge and evidence to inform Māori development strategies and their implementation.

"Research should support rather than determine Māori development. It should support rather than determine the agenda; it can help to set the agenda. Research should provide the knowledge and the tools for Māori development." (Participant 3)

Research was considered to be relevant to all stages of the Māori development process, from enabling the clear articulation of aspirations and visions to evaluating progress towards clearly defined goals.

"Development is very difficult to make happen unless people get used to strategically planning where they want to go and how they will get there and then...using research as a tool or method for helping people...get to a vision or their aspirations..."(Participant 1)

"...evaluating or tracking whether you're actually getting to where you thought you wanted to go, and there are many research tools you can use, where they're actually assessing your achievement and whether you are on track or whether you achieve what you set out to achieve." (Participant 1)

Participants also noted that the strengthening of Māori research capacity is in itself a direct contribution to Māori development.

"There is definitely a link between research and Māori development, the paradox is that the research is developmental, that is, developmental research to support Māori development that is also in a developmental phase, which makes things difficult. But, increasing Māori research capacity in turn is a direct contribution to Māori development." (Participant 3)

According to participants, research should contribute to Māori development at a number of levels: individual, community, national and global.

> "...it contributes to a sound approach, therefore sound research should contribute directly to Māori development...it needs to be incorporated into policy...its got to be incorporated into the actions that they take, the decisions that they're making." (Participant 2)

> "...solving problems society faces and we face internationally in a global context...how its contributing to solving world problems...we need to be able to realistically move between different scales from the individual to international." (Participant 1)

Interviewees stressed that Māori should actively pursue participation in the local and global knowledge society. It was also noted that participation in the knowledge society should not be an exclusive function of academic or technical institutes, but should be widely available to the range of Māori organisations and communities.

> "...it's really about how we use knowledge in future to actually achieve Māori development aspirations and developing new technology innovation and building an increasing capacity within an international or global environment. So I think there are facets of the knowledge economy, knowledge research that goes on within everybody's work, really, and we shouldn't see it as 'something over there' that's different, that's external to us or separate from us, because it's actually a part of everybody...people should also feel they can understand what it is and how it can contribute to their lives so I think that's actually quite an important aspect in future, helping communities, groups, to grow and develop..." (Participant 1)

In summary, from the perspective of interviewees, Māori development and research are intimately connected in that research generates knowledge, which in turn is the foundation for Māori development. Another important theme was that Māori should actively participate in the global knowledge society – to benefit from the wider experience of other groups and to add to the total innovation pool.

The Purpose of Research involving Māori

According to participants, the purpose of research involving Māori is twofold: first, it is to generate knowledge; second, it is to benefit Māori and contribute to Māori advancement.

> "...through people exploring something to create new technologies or being innovative, because I think research is a fundamental basis for opening up the world and it should be used increasingly to solve problems in terms of social problems, cultural problems, economic problems, and it should be directed at trying to improve peoples lives, although it is not used in that way all the time, but I think the purpose of research is fundamental to human behaviour, it's really based on the inquiring mind that people have about things around them, and then the actually research gives you the tools to be able to explore and find out and assist others."(Participant 1)

> "I think that what comes out of research is knowledge...that provides the basis to development, and I see research very much as being the analytical tool to gain that knowledge and then to use that knowledge in a way to achieve what people aspire to achieve. I think research and knowledge should go hand in hand, and are inseparable." (Participant 1)

Participants noted that historically Māori have relied on building a sound, stored knowledge base as a foundation for advancement.

> "...it doesn't matter where we go and what we're doing, we can look back at the experience of great figures of our culture and see that they relied on what had been gleaned in experience and stored as a knowledge base." (Participant 2)

Interviewees highlighted the role of research involving Māori in the generation of Māori-specific knowledge. Participants also commented that the contemporary generation of Māori knowledge draws on both customary and modern sources both within and beyond the Māori world. Another significant point was that knowledge generated through research involving Māori should be used to achieve collective Māori goals.

"Well, if we go back earlier and look at development as being based on all forms of knowledge, we see that in more recent years we tended to concentrate a lot more on just Western or more modern forms of knowledge and we've ignored...indigenous knowledge or traditional knowledge...when we talk about even Māori knowledge I see it as being made up of mātauranga Māori but also made up of more contemporary forms of Māori knowledge as well, which are really fusions between traditional knowledge thinking, cultural thinking and western knowledge, so there's obviously many forms of knowledge around that we often don't tap into, and I think we need to explore those different forms of knowledge a lot more if we're really going to be truly innovative and advance with new technologies in the future..." (Participant 1)

"...to gather their [Māori] knowledge for a common purpose...to validate a Māori way of thinking..." (Participant 3)

"...as a way to actually fulfil their development aspirations." (Participant 1)

According to participants, the knowledge gleaned through research involving Māori should contribute to developing solutions to address the marginalised position of Māori in society and to realise collective Māori aspirations. There was also an indication that research may have a direct role in Māori empowerment:

"...to produce the evidence...we need research that says this is what you can do about it..." (Participant 3)

"I think research involving Māori...has been done to secure...a shared vision and an informed way of getting there and implementing it...to formulate an informed position on which to make your assessments and analysis" (Participant 2)

"I always feel that Māori who do this sort of thing, come back and do it [research] for the people." (Participant 4)

"Sometimes research just provides the seed...for empowering people..." (Participant 1)

The major themes that have emerged from interviewees' views on the purpose of research involving Māori were benefits for Māori, Māori advancement, and knowledge generation.

The Principles of Research that will contribute to Māori Development

Participants identified a range of research principles that will contribute to Māori development.

'Māori identity' was perceived by participants as a principle of research that would contribute to Māori development. As a principle to guide research activities, 'Māori identity' would require that as a minimum the research should be consistent with Māori preferences, but ideally would be culturally responsive and affirm Māori beliefs, values and practices.

> "...[research] has to identify the cultural group...that it's intended for so that ...research is actually culturally influenced in terms of perspectives that you build into that research and it often affects the whole research design depending on the groups that you have to work with. So I would see research being done for a business or an economic development group as being quite different to research done for a hapu or whanau group where people actually think quite differently. A lot of my research, I guess the principles, the basis for a lot of it, are actually cultural values." (Participant 1)

One participant used an example of research involving Māori prison inmates to express concerns for Western monocultural approaches to research involving Māori. The basis of the concern was that mono-cultural approaches that do not take account of Māori cultural beliefs and values are ill equipped to interpret Māori experience.

> "...studying criminals from a completely European perspective, New Zealand pakeha perspective. And failing to realise that the best people to actually unravel the souls of these men are our own experts, our own people of knowledge and heart, they are the best psychologists for our people." (Participant 2)

Quality was identified by participants as another key principle. It would be reasonable to assume that research consistent with the principle of quality would meet high technical and cultural standards.

"...got to be high quality research." (Participant 3)

" ...developing business based on quality..." (Participant 2)

The principle of indigenous alliances is concerned with the need for Māori-specific research to draw on the commonality and strengths of other indigenous peoples' research experience.

"Through research it ties us, it gives us a relationship with other indigenous people....We need good researchers for that; we need good relationships throughout the indigenous world...sharing of cultures..." (Participant 4)

The principle of maximum benefit is concerned with the need for research to make a direct contribution to Māori development. One participant suggested Māori development research should focus on identifying mechanisms to unlock Māori potential:

"...the research has to actually have a way of contributing to development, so it's no good doing some research if you find that the results that you get from that haven't actually contributed in a way, that it's just ended up being a nice piece of research..." (Participant 1)

"...to me the most serious or constructive research that could have been done could be the research into the actual fabric that makes even the poorest see the opportunities that they have even with limited resources...how barriers are removed from the minds of people, that biggest barrier towards development is inside the mind." (Participant 2)

In further developing the theme of maximum benefit, the principle of capacity building was identified. In this context, capacity building refers to the role of research in contributing to the mutual skill and resource development for both research participants and researchers.

"...information sharing and co-learning, where I see us learning off each other a lot more to actually move ahead..." (Participant 1)

Participants' comments indicated that the principle of Māori control is fundamental to Māori development. One participant distinguished between the physical and philosophical control of research, which were considered to be closely interrelated. Physical control, for example,

referred to control of project resources, while philosophical control would be exercised in determining the type of framework used for analysis. Concerns were raised that research involving Māori controlled by non-Māori does not benefit Māori.

> "...I think research involving Māori, governed by Māori...has been done to secure...a shared vision and an informed way of getting there and implementing it...a lot of research involving Māori has not been done by Māori, it's been done by people once again studying Māori, studying us from a distance, and I think we already know that while we might be able to satisfy some curiousity about strangers and so we might look at what they've written about us, it's a little consequence..." (Participant 2)

> "Māori control of research can be broken down into physical and philosophical control...physical control over resources...philosophical control...control over what things get validated..." (Participant 3)

> In summary, the principles of research that will contribute to Māori development identified by interviewees were: Māori identity; quality, indigenous alliances; maximum benefit, capacity building; and Māori control.

Assessing the Contribution of Research to Māori Development

Interviewees strongly agreed that there is a clear need to develop robust, holistic and comprehensive indicators to assess the contribution of research to achieving broad Māori development goals.

> "...there is a need to devise indicators...you need to assess the outcome...there must be evidence..." (Participant 3)

> "...clearly identify a set of indicators that will tell you whether you have achieved some measure of success and I also believe that people in the past worked with a very narrow set of indicators and would be too preoccupied with just identifying outputs, such as 'have you produced these papers?'...clearly identify where that research fits into a bigger issue or in terms of solving a bigger problem, and so I think in future we need to be a lot more creative about looking at a more holistic set of indicators or performance measures and knowing what we've actually achieved..." (Participant 1)

At a general level, it was noted that successful research should meet study objectives, but that in terms of Māori specific research, those objectives should be consistent with Māori development goals. Further, research that contributes to Māori development should be measured in terms of cultural alignment.

> "Research could be put through a Māori development peer review process that assesses Māori specific elements...it could be reviewed by a Māori advisory group...Māori development specific indicators should be developed..." (Participant 3)

> "It has to meet objectives of research...therefore objectives need to be Māori development objectives...look at Māori development objectives and then cast research questions around this...include Māori development in the frame of reference...we do need to think of success in a very broad way and not in a very narrow way and we also need to make sure that we've built in a very strong cultural component, the way we measure that, particularly Māori." (Participant 1)

According to participants, in order to gauge the contribution of research to Māori development in a comprehensive way, measurements should be taken throughout a research programme and following its completion. Interviewees indicated that a mix of process, output and outcome measures should be developed.

> " ...it [the research inquiry] needs to be assessed...to review that enquiry steadily and regroup." (Participant 2)

> "Assessments could be made at different times, such as at the proposal stage, during the research process and once the research has been completed or retrospectively" (Participant 3)

Participants provided a number of examples of possible areas for the development of process indicators. They included relevance to Māori, community participation, frameworks for analysis, dissemination practices, and the interest generated in the project findings.

> "...how relevant is the research to Māori...also, how the results are interpreted and presented is critical..." (Participant 3)

"But I often measure my projects by the number of people I have involved in the work and who are asking questions...the level of interest and participation in the project..." (Participant 1)

Participants noted that the types of indicators that should be used to measure research usefulness are dependent on the objectives of individual research projects. Examples of relevant indicators included definable products, expanded capacity, the satisfied expectations of participants, and portability of methods to other settings.

"...there must be a definable product...when it becomes a legacy...time is the key factor...its durability ..." (Participant 2)

"I think for a lot of research in this country, one area that we're really undersold research is its contribution to capacity building, by even having people from the iwi working in a university system...gaining a lot of expertise that you're able to then take out there and work with in other groups...I would probably measure from the point of view of what contribution has it made to human or social capacity...Another measure might be the way the research has delivered its results out to the group or community , and how those results have been used. An indicator could be a way that a piece of research has actually been implemented within an iwi management plan or a hapu management plan." (Participant 1)

"...that piece of research...used further afield." (Participant 4)

There was a clear view among participants that outcome measures should be developed.

"...do it [measurement] retrospectively...assess the outcome...looking at some positive outcome and see if it is connected to research that has been carried out..." (Participant 3)

"But a lot of our research is contributing to more complex issues, processes going on, and therefore we obviously need more adequate ways of knowing what the contribution is...whether it increases or partly increases some of the bigger level issues that have been identified at the beginning of the project, because I think whenever we are doing a project we obviously look at an issue or something we want to work towards where we find solutions..." (Participant 1)

"...[make a] long-term assessment of the research and the benefit [of the research] to the people..." (Participant 4)

One participant identified a range of areas for the development of outcome measures, including quality of life and the contribution to addressing community, regional and national issues:

"...so maybe in the future the indicators should be trying to reflect a bit more about that contribution to improving people's lives...outcomes that are based at the community, regional, national level, and were continually looking at what we tried to achieve and whether we're actually achieving that and we need that continual loop, that type of loop model developed where you can accurately go back all the time and clearly state that after two years we're actually making progress in this direction or not..." (Participant 1)

Interviewees acknowledged that the contribution of research to positive outcomes is unlikely to become apparent within the short or even medium term, and that this should be taken into account when seeking to measure that contribution. Outcomes may not be evident for years. Further, given the potential time lag between completion of a research project and its impact in terms of outcomes, one interviewee suggested that incremental outcome measures might need to be developed.

"...the research may be contributing towards development and we may only be able to see that achievement within two or three years...or it might be in a 10-year timeframe, so research doesn't often give instant results; and they take a long time to feed through, so we have to always see it in that context...a good indicator would actually tell you whether you're heading in the right direction and so it's often incremental; that doesn't mean you've got there, but it should be showing a trend towards the outcome or what you aspire to achieve..." (Participant 1)

"...a set timeframe for assessment [is needed]...Assessment that may give immediate...1 or 2 years...then...long-term assessment..." (Participant 4)

"...for too long there's been such a separation between research and policy, and I see that research and policy need to be closely linked and that's where you also need to have performance measures or indicators continually feeding back into policy...to know whether your policies are actually working or not..." (Participant 1)

The need for indicators to be robust was emphasised.

"...researchers must be able to clearly prove the outcomes of their research...through the weight of evidence..." (Participant 3)

"...it may be just the performance measures or the review process that we have that are failing a project, so we need to be very careful with the way that we evaluate and review research projects." (Participant 1)

The key points in relation to assessing the contribution of research to Māori development are that there is a need for robust and comprehensive process, output and outcome indicators. The indicators developed should enable the measurement of, among other things, cultural alignment.

The Benefits of Research involving Māori

All participants strongly agreed that Māori, individually and collectively, should benefit from research that involves Māori. Further, there was consensus that research that benefits Māori will in turn lead to gains for all New Zealanders.

"In the first instance Māori should benefit, and that is Māori in the broadest most diverse sense. But what benefits Māori, in turn is of benefit to all New Zealand." (Participant 3)

"First of all there has to be a benefit for Māori people themselves, they are the first beneficiaries, and secondly it should be shared with other indigenous peoples and going on into the whole country, but...the first beneficiaries for Māori research must be the Māori." (Participant 4)

"Everybody should really benefit, if Māori aspirations are fulfilled and we build capacity for Māori people in New Zealand, I think that would be one of the best ways of moving New Zealand society forward...and they are all stepping stones towards making New Zealand society as a whole a much better place to live." (Participant 1)

There was general agreement among participants that research involving Māori has potential implications at the global level. First, research can lead to Māori capacity building, which enables Māori to participate more effectively in the global community and share the benefits of active membership in the global community. Second, at global-level participation Māori are able to contribute to more positive global development that has benefits for all people.

"...what's good for Māori, is good for everyone...if we come up with positive results then everybody benefits because we continue to contribute to the family, the global community, and the wider Aotearoa New Zealand." (Participant 2)

"...we also need to picture capacity building moving towards Māori development within an international context..." (Participant 1)

Participants acknowledged that while it should not be the primary purpose of research involving Māori, researchers should also benefit from research projects. Therefore, there should be mutual benefits for researchers and Māori.

"There will also be benefits for researchers, employment or career development, but this certainly should not be a primary purpose of research." (Participant 3)

A number of suggestions were made as to ways to ensure that Māori benefit from both small-and large-scale research projects, including stringent funding criteria that require researchers to demonstrate benefits to Māori, the consideration and incorporation of Māori cultural preferences into research design and processes, and research involving Māori to be controlled by Māori.

"A funding requirement for research projects should be that researchers can convincingly demonstrate that Māori will benefit from the project." (Participant 3)

"There must be an understanding in [research] policy...that the needs of Māori people require an understanding of our differences...different cultures..." (Participant 4)

"...they've got to stop funding people who are not Māori to carry out a study of Māori, unless those people have been specifically requested to carry out their work by...Māori iwi or organisations...they need to be channelling, those public monies ought to be going specifically to Māori; there needs to be a specifically Māori organisation...that is allocated an amount of money..." (Participant 2)

It was also strongly suggested that the academic community give greater recognition to the value of Māori institutions and Māori researchers, and increase effort to establish research partnerships with Māori. Importantly, interviewees also recommended that adequate levels of resources be made available for research involving Māori.

"...need a very good integrated policy within New Zealand funding agencies...to have greater acknowledgement by all researchers...of the value of including community groups...acknowledgement of the contribution that they [Māori researchers] can make to all forms of research...we need to acknowledge and respect that there's an important Māori research component within a lot of projects..." (Participant 1)

"...we need...more [Māori] people that can move between communities and groups, crown research institutes, universities and other agencies and feel comfortable with moving, and making that transition between these groups....Obviously the other big area that we need to make Māori research really work in New Zealand is having the resources...targeted at projects which could build capacity...more shared research between those different levels, not just iwi trying to go it alone...but actually seeing those agencies working closely together sharing staff and resources...better partnerships..." (Participant 1)

"I see a lot of individuals and groups...struggling around the country and I think my major contribution for them would be to try to improve the networking that we have around the country and the way that we form collaborative research and better partnerships to...work more closely together with a lot of these people that are...out there in communities. It also gives us a lot more relevance to our research and a lot more justification for our research if we get a better understanding of some of the real issues, and I think that would be a major contribution to sustainable development." (Participant 1)

In summary, benefits from research involving Māori should accrue in the first instance to Māori individuals and Māori collectives. However, the situation of Māori is inextricably linked to the situation of other New Zealanders, and therefore gains for Māori will lead to gains for all New Zealanders. Further, research involving Māori may better position Māori to contribute to and share the benefits of participation in the global community. Interviewees acknowledged that research involving Māori should also, secondarily, lead to benefits for researchers. Finally, participants identified a number of measures that can be taken to better ensure that Māori benefit from research involving Māori.

Key Issues in Research involving Māori

Participants identified a range of issues for consideration when undertaking research involving Māori.

According to interviewees, research involving Māori should generally be carried out by Māori who are culturally competent, to ensure that participants have confidence in the research team. Approaches used should be consistent with preferred Māori processes. Local experience and understanding of the area in which the research is being carried out was also identified as an advantage.

"...the kaupapa has to be defined...the kaupapa is such that it inspires them, because they can relate to why knowledge is being gathered, because I think that Māori will participate willingly when they know that the knowledge belongs to a whare, say, that they have a place in, a whare used in a metaphorical sense, a waka that they have an oar to steer..." (Participant 2)

"...cultural confidence issues...researchers must retain Māori confidence..." (Participant 3)

"Knowledge of the geographical area that you're interviewing in, the structure that they have on their marae, we're all different." (Participant 1)

"..for example, if you're interviewing a Māori person, you must know the language. It would be better if that person was a Māori speaker and especially if they knew the tribal dialect." (Participant 4)

From the perspective of the interviewees, there should be close collaboration with communities at all stages of the research process to ensure the research is relevant and that both the research team and participants have a clear understanding of the value of the research to Māori.

"I believe in using participatory approaches as much as possible to make sure that people fully understand and can actually lead the research themselves...to make sure people fully understand why the research has been carried out and how that research will contribute to coming up with solutions that are going to help them in their lives...what is the purpose of that research in addressing issues that are of concern to them, and those issues may be environmental issues, they may be health issues, they could be housing issues, they could be employment issues...making sure that the research is not isolated or separated from the people in the communities." (Participant 1)

"...researchers should aim to produce results that are valued by the community..." (Participant 3)

According to participants, other areas that require attention when carrying out research involving Māori are intellectual property rights and Māori diversity. There should be open discussion on the ownership of intellectual property arising from the research to ensure Māori interests are protected. Responses stressed the importance of research taking into account the diversity of Māori. Māori are not a homogenous group and live across a wide range of situations and circumstances. Research should aim to retain relevance to Māori as a heterogeneous population.

"...issues surround intellectual property, that is the ownership of information and knowledge...the need to acknowledge diversity...don't rule anybody out...there are around 600 000 Māori people...acknowledge the range of experience...each person has been on their own journey, and research should try to take account of this...try to shy away from some normative model of what a Māori should be..." (Participant 3)

To sum up, participants identified the following key issues that should be considered when undertaking research involving Māori: Māori cultural preferences; Māori participation; intellectual property rights; and Māori diversity.

The Relationship between Researchers and Research Participants

There was consensus among interviewees that the relationship between researchers and research participants should be mutually beneficial, though the primary focus should be on accruing benefits for participants. Some concern was expressed that participants do not always benefit equitably from research projects.

"...an outcome that's beneficial to the participant....So the researcher has got to want the information, not for themselves but really for the entire community of people." (Participant 2)

"Ideally it should be reciprocal, though it seldom is [as beneficial for the participants]...researchers should acknowledge that participants give more than they receive..." (Participant 3)

"...it becomes a co-meaning, co-learning experience and to me that co-learning is very much pivotal to capacity building, because it's building capacity then is sharing experiences, and sharing knowledge, sharing the way that we undertake research...capacity is not a one-way ticket. So when I'm working with any of the iwi or hapu groups that I work with around the country, I'm always learning from them as much as they're learning from me." (Participant 1)

Interviewees emphasised that the relationship between researchers and research participants should be based on trust. It was acknowledged that both time and resources would be required to build secure trust-based relationships. Further, researchers should respect the

beliefs, values and aspirations of research participants and therefore it is reasonable to expect that these elements should be reflected in research design.

> "One of the most important things in terms of a relationship is trust and I think if you're going to work with a group or another individual that hasn't worked with researchers before, that you need to develop a really credible relationship which is obviously going to take a long period of time...two of the main things that come to mind are respect and trust...having respect for their perspectives, their beliefs, their values and their aspirations." (Participant 1)

It was noted that active Māori involvement in research processes and clear communication are important for research that contributes to Māori development. Participatory research was identified as the appropriate model for research that is relevant to Māori.

> "...research should be owned by everyone...[with participants] being actively involved and also understanding why research is being carried out and having input into the design of that research and then I think people would probably understand the results in what the research that they've got when they're involved from the beginning of the process rather than at the end...with any research project there needs to be a component of that research that actually works with people, and clearly identifies its purpose in terms of sustainable development and to improving peoples lives and to solving problems...we need to have...good communication..." (Participant 1)

Overall, there should be a mutually beneficial relationship between researchers and research participants. That relationship should be trust based and characterised by open communication.

Links between Research involving Māori and Research outside New Zealand

Interviewees agreed that there are links between research involving Māori and research outside New Zealand. Research involving Māori will benefit from lessons learnt from international research approaches.

"Research is an international discipline...there's a lot to be gained....Even the extreme Māori viewpoint has a lot of international company, such as feminist or constructivist research..." (Participant 3)

Participants also commented that Māori are adept at applying new externally generated knowledge to advance their own position, but that application of that knowledge should be consistent with a Māori cultural values framework. Interviewees noted the potential value for Māori in forming international research alliances.

"...historically they've [Māori] been very good at tapping into all forms of...knowledge and science and then utilising those forms of knowledge and science for their own goals and aspirations. And generally what people will identify with...in New Zealand or overseas is something that's appropriate to be based ...on the cultural values...having a look at what constitutes a framework for themselves in terms of cultural standards, protocols, ethical and moral standards as to what forms of industry they might go into...that actually has a major effect on the types of research a lot of Māori people go into, and also I think Māori need to form...partnerships and joint ventures to...succeed in this...global environment, so they will definitely be looking at all forms of research." (Participant 1)

There was some acknowledgement that for Māori to gain maximum benefit from international research, initial capacity building in terms of research competence would be required.

"Māori people can see themselves as having access to all that huge amount of information but they're also going to be very wary of what's out there, and I think that's where we have a major role within Māori development in New Zealand is to make sure that people have the capabilities, the skills, the attitude, and that they network appropriately in New Zealand first, that they can be much more aware of this information and being able to interpret it properly, make sense of it, for their own use in New Zealand."(Participant 1)

All interviewees strongly agreed that there are links between research involving Māori and research involving other indigenous peoples. Commonalities between Māori and the experiences, beliefs, values and aspirations of indigenous peoples were identified as

underlying those links. Common aspirations for self-determination and increased control, as well as the propensity to draw on the knowledge of previous generations were highlighted.

> "...there are links, I say that because other indigenous peoples have the spirituality...We're talking about wairua not about church...the usage of our land, the reverence that we have for our land, goes back to our whakapapa too doesn't it..." (Participant 4)

> "...there are huge links, that's an area where we haven't really tapped into, this whole area of international networks, of culturally based research...all those areas are actually moving in very much the same direction, and most indigenous people around the world are also seeing their research...as contributing to the bigger picture of self-determination, of what they would call tino rangatiratanga, and also trying to fulfil their aspirations, to actually move forward in a way where they're feeling they have control of their own destiny. So whether it's a farmer in the middle of Africa or somebody who's in the indigenous peoples in the Philippines or Malaya, those people feel that they have got a major contribution to make based on their culture and on the traditional way that they've lived and on the knowledge that's been passed on to them from previous generations..." (Participant 1)

Interviewees highlighted examples of the ways in which indigenous peoples, including Māori, choose to draw on traditional knowledge and focus their efforts on development in areas consistent with their cultural and spiritual beliefs and values.

"...there is a very strong move by Māori people towards organics and it's one example of where people feel they're actually starting to draw on their cultural values and also their spiritual philosophies in terms of also achieving economic aspirations. And so it's a very good example of why organics is being a big interest to a lot of the Māori community, it's actually fulfilling a very holistic and spiritual part of people and how they actually look at the world, and also fulfils economic aspirations. So I think that's where indigenous people have a lot in common around the world, is that they want to go ahead in development. The future based on very strong...cultural values and on what people basically call traditional knowledge, but also using their cultural perspectives in terms of developing a plan for the future for themselves. And so that's where I think research has a major contribution to trying to help indigenous people achieve those goals and aspirations." (Participant 1)

"There's been a lot of interaction between Māori and Tahitians, Māori and Hawaiians, and they've just been in terms of the land...also the language, I think the kohanga reo and kura kaupapa movements have made a major impact on indigenous people across the world who have come here and invited Māori involved with that to attend hui and the rest of the national forums...sometimes their job designation is not as a researcher but...they are constantly researching and reviewing what they're gathering..." (Participant 2)

According to participants, there is scope to exploit the research links between Māori and other indigenous peoples positively for mutual benefit.

"...collaborations are happening through a broad spectrum of Māori and other indigenous communities, everything from land systems...land loss...language...genetic modification..." (Participant 2)

In summary, the interviewees consistently expressed that there are clear links between research involving Māori and indigenous and non-indigenous research outside New Zealand. Global-level research alliances were considered to be of mutual benefit to all parties, though it was noted that for Māori to receive maximum benefit from joint research initiatives, there might be a requirement for initial capacity building.

Summary

Over the nine categories presented, there was a high level of consensus between the interviewees. The subtleties and nuances of each participant's perspective added considerable illumination and depth to the data. At a higher level there was strong consistency between the participants' viewpoints and themes identified earlier from the literature. The findings from this survey and the themes identified earlier informed the construction of the Framework presented in the next Chapter.

CHAPTER SIX

A FRAMEWORK TO ASSESS THE CONTRIBUTION OF RESEARCH TO MĀORI DEVELOPMENT

'He ihu waka he ihu whenua'[9]

Introduction

The findings of this study confirm that research is a key requisite for a wider Māori development strategy. This chapter presents a framework to assess the contribution research makes to Māori development. The chapter begins with a discussion of other mechanisms used for this purpose, highlighting their collective strengths and weaknesses and how the proposed Framework differs from and complements them. The Framework and its constituent components are then described in detail and the application of the Framework to the contemporary New Zealand RS&T sector is discussed. The Framework is then applied to an actual Māori-specific research project to assess that project's contribution to Māori development. The chapter concludes with a brief discussion of potential indicators for the Framework, and the location of the Framework at the interface between the RS&T sector and Māori.

Mechanisms for assessing the Contribution Research makes to Māori Development

In recent years New Zealand's public RS&T sector has paid greater attention to improving systems to take account of Māori needs and preferences (Cunningham, 1999a). A range of mechanisms to assess the quality of Māori-specific research has been developed. These mechanisms were largely designed for use at the proposal stage, before the actual research was carried out. In general terms, the assessment mechanisms for Māori-specific research focus on robust research design, Māori input and partnerships, the capacity of the research team to complete the proposed study, scientific merit, benefit to Māori, end users' capacity to apply research findings, and Māori capacity-building (see HRC, 1998; FRST, undated). Māori

[9] "A canoe bow, a headland." This whakataukī '...expresses the saticfaction...on safely reaching the landing place. It likens the canoe and headland to the human noses which press together in the hongi of greeting' (Mead and Goss, 2001, p. 73).

researchers and other Māori expertise are also increasingly involved in the assessment process, for example, in developing purchasing systems, as peer reviewers, and as members of assessment committees. While Māori acknowledge the improvements in purchasing assessment mechanisms, it is clear that further work is required to develop assessment systems that are responsive to Māori and meet Māori expectations of a robust assessment system, able to take full account of Māori aspirations.

The strengths of existing assessment tools are that they require a high standard of scientific merit, emphasise links with Māori end-users, expect that Māori will benefit from research, focus on human capacity-building, and emphasise it should be possible to implement relevant research findings in practical and measurable ways.

The major weakness is that the tools have been developed within a Western frame of reference. Therefore, current purchasing mechanisms are not equipped to assess research proposals underpinned by a Māori knowledge system and aimed to generate Māori-specific knowledge. The implication of this gap in purchaser-assessment capacity is that Māori-specific research grounded in a Māori worldview is marginalized in the public RS&T system. Clearly, this is unacceptable to Māori.

The proposed framework to assess the contribution of research to Māori development is complementary to existing mechanisms in four ways. First, it relies on the current mechanisms to assess scientific merit and ensure compatibility with high-level Government priorities. The Framework also complements other mechanisms concerned with measuring the successful achievement of outcomes, and the attribution of those outcomes to a specific research activity. Further, it builds on existing requirements to ensure links with Māori end-users, in the expectation that Māori will benefit from research, human capacity building, and on the relevance of research. It also adds to current New Zealand RS&T sector capacity by providing a mechanism to assess the contribution of research based within a distinctly Māori worldview. Third and most significantly, rather than focussing entirely on the purchasing function, the proposed framework can be used at the three levels of the contemporary RS&T sector: policy, purchaser and provider. Fourth, because other mechanisms have concentrated on the purchase of research, the mechanisms are designed for use before research is carried out, often at the research proposal stage. The proposed framework can also be used in this way, furthermore it can be employed during the research project in a monitoring capacity, and retrospectively, after the conclusion of the research under consideration.

The *Te Ihu Waka* Framework

Te Ihu Waka is a framework for assessing the contribution research makes to Māori development. The Framework has been derived by using a kaupapa Māori approach (see Chapter Two), drawing on Māori aspirations for development and research as articulated in the literature (see Chapters Three and Four), and Māori research expert interviews (see Chapter Five).

The Framework is structured around the intersection of principles for Māori development research and research assessment platforms (see Table 3 below).

A principle is a guiding tenet. In the context of the *Te Ihu Waka* Framework, principles are a practical means of providing philosophical direction to assess the contribution of research to Māori development.

The Framework identifies first- and second-level Māori development research principles. The first-level principles succinctly express the meeting point between Māori development and scientific research, and therefore illuminate the central qualities research can bring to Māori development. Each first-level principle has three or four associated second-level principles. The second-level principles provide greater specificity for the key characteristics of Māori development research. Together, the first and second-level principles make explicit the nature of Māori development research. The individual principles should not be considered in isolation from one another. In fact, the inextricable links between the principles is an important foundation for the Framework, ensuring consistency with Māori customary concepts of wholism and interconnectedness, and with other Māori development frameworks. As stated in Chapter Three there is some consensus that the central characteristic of Māori development frameworks is holism or integration (Cunningham, 1999a; Durie, 1996; Loomis, 2000a; Puketapu, 2000; Royal, 1993; Walker, 1990). The principles are placed on the vertical axis of the Framework.

The framework also identifies research assessment platforms. The assessment-platforms approach acknowledges that research progresses through a number of stages, and that those stages are the logical and optimal points of assessment. Three assessment platforms common to all research endeavours are – process, output and outcome. These platforms comprise the horizontal axis of the Framework.

The Framework requires that the process, outputs and outcomes of the research activity under consideration be assessed in terms of consistency with the identified Māori development research principles. Therefore, the meeting point of the horizontal and vertical axes (that is of the assessment platforms and principles) provides the focus for assessing the extent to which a research activity contributes to Māori development.

Table 3 Te Ihu Waka - A framework to assess the contribution research makes to Māori development

First-level Principles	Second-level Principles	Research Assessment Platforms		
		Process	***Output***	***Outcome***
Maximum Benefit	*Collective Māori Good*			
	Common Māori Good			
	Mutual Benefit			
Empowerment	*Control*			
	Changes in Power Relationships			
	Capacity Building			
Advancement	*Knowledge Generation*			
	Synergy			
	Adaptation			
	Value-added Resources			
Māori Integrity in a Global Society	*Global Alliances*			
	Identity			
	Diversity			

Research Assessment Platforms

The three research assessment platforms were derived from the literature (see Chapters Three and Four) and the findings from the survey of experts (as described in Chapter Five). The platforms are sequential: when the research activity under consideration is being undertaken the process eventually leads to outputs, and outputs in turn facilitate outcomes.

The links between process and output are explicit and are easily measured. The links between the output and outcome are implicit and are difficult to measure.

Process

The first research assessment platform is concerned with the course of action to be undertaken during the research activity. The Process will invariably consist of a set of discrete steps. Obviously, these steps will vary according to the activity in question. Consideration of each of these steps in terms of the Māori development principles will facilitate the assessment of the research activity's contribution to Māori development. For example, research fieldwork that attempts to use Māori researchers and actively to up skill them is more likely to contribute to Māori development than research fieldwork that does not specifically target Māori researchers.

Outputs

Any research activity should have a clearly defined set of intended outputs. Generally, the research activity's success or failure will be judged on whether those specified outputs are produced. Using *Te Ihu Waka* to analyse the outputs of research activities enables the assessment of how that output contributes to Māori development. For example, a highly technical health-needs assessment report produced as a result of a research project may not be immediately useful to Māori health providers. However, if the report was tailored to the local-level context and presented in a form relevant to Māori health providers, the output (in this case the report) from the project could indeed facilitate Māori development.

Outcomes

The third research assessment platform – outcomes – deals with the conversion of the outputs into meaningful changes at a societal level. The term 'outcome' is used in a variety of contexts, but in the main it explains an end result or consequence. Outcomes are not easily measured, it is difficult to trace their manifestation to a specific research output, and more difficult still to a research process (Kingi, 2002).

Nonetheless, *Te Ihu Waka* is concerned not only with outputs but also with outcomes. Although outcomes are infinitely more difficult to measure than outputs, and cannot always be linked directly to the research, they provide a better overall assessment of contribution to Māori development. An output such as a published article may have minimal impact on Māori. But an outcome such as improved land use could be a significant indicator for Māori

economic growth. Outcome measures are not sufficiently developed for application across the range of research activities. But the clear expectation from the Framework is that researchers will have recognised the importance of outcomes and will have addressed the issue by suggesting likely outcome goals and the key indicators that will enable effectiveness to be measured.

Māori Development Research Principles

Like the research assessment platforms, the Māori development research principles have been distilled from a wide base of literature (Chapters Three and Four) and from the findings of the survey of experts (Chapter Five). There are four first-level Māori development research principles: Maximum Benefit, Empowerment, Advancement, and Māori Integrity in a Global Society. Each of the four first-level principles has three or four constituent second-level principles.

Maximum Benefit

According to this principle research should aim to provide maximum benefit to Māori through enhancing the capacity of Māori to achieve their own distinctive potential both as individuals and collectively. Benefits may be social, cultural, economic, and should represent a good return for the investment of energy, time, and capital. Benefits should also be measurable.

The term 'maximum benefit' is not directly attributable to a single author but the notion of ensuring the greatest utility to Māori through Māori development efforts has been expressed by a wide range of Māori academics (see Cunningham, 2002; Durie, 2000; Johnston, 1999; Kingi, 2002; Puketapu, 2000).

Collective Māori Good

Collective Māori good is concerned with ensuring research carried out at the local level can potentially benefit Māori at a national level, and even at global levels. Conversely, this principle also holds that research carried out at global or national levels can effect positive change at the local level. For example, the methodology used by a successful local-level research project or programme may be duplicated in other regions, or nationally. Similarly, it is essential that major national-level research projects lead to positive changes at the local community level.

This principle is also concerned with the capacity of research to contribute to the vitality of Māori collectives. Māori collectives come in a variety of forms, from the more traditional structures of iwi, hapū and whānau to contemporary configurations such as Māori urban authorities, kōhanga reo or kura kaupapa Māori whānau. These structures provide a mechanism for Māori development, and research should be able to enhance their capacities and any synergies between groups.

'Collective Māori good' as a term has not been widely used in relation to Māori development. The integration between the local level and national level is consistent with development studies theory and in particular alternative development (Friedmann, 1992; Lipton, 1977; Overton, 1997b). The central importance of Māori groups as a means to achieve development is often referred to in Māori development literature (Department of Māori Studies, 1995; Durie, 1998; Loomis, 2000a).

Common Māori Good

This principle arises from Māori concern with the preoccupation of 'deficit research', where Māori are compared with non-Māori in terms of socio-economic indicators (see Chapter Four). Although Māori are by no means a homogeneous group, there are sufficient commonalities to merit treating Māori as a distinctive population in terms of social, cultural and economic outcomes (Durie, Fitzgerald, Kingi, McKinley & Stevenson, 2002).

In contrast to the principle of collective good it must be noted that not all Māori are connected with traditional collectives such as iwi or hapū nor the modern pan tribal groups. Common Good is concerned with ensuring that interests of all Māori are advanced.

The innovative term 'common Māori good' is a development of Durie's diverse Māori realities (1995). The common Māori good principle recognises Māori diversity but also accepts that there are major Māori commonalities. Furthermore this principle acknowledges both Māori collectives and Māori individuals.

Mutual Benefit

The principle of mutual benefit recognises there will be other parties, alongside Māori, that should benefit from Māori-specific research. While the primary concern remains the achievement of maximum benefit for Māori, it is reasonable that researchers external to Māori organisations should expect some benefit from their involvement in Māori-specific research.

Consistency with the principle of mutual benefit will require an approach that emphasises negotiation and agreed upon arrangements. These benefits should be negotiated before initiating the research project or programme, and mutual expectations should be clear from the outset.

Developing this notion further could see high-level negotiations undertaken between Māori organisations and other key players in the RS&T sector such as CRIs, universities, the private sector, or other Māori organisations. At that level, negotiations may lead to the development of memorandums of understanding where common goals for research are identified, general protocols for carrying out research are recorded, and the expectations of both parties are outlined. Such high-level arrangements would strengthen the relationship between Māori and the RS&T sector, and would streamline the process for research to be carried out by external researchers with Māori groups.

Like the preceding Māori development research principles the term 'mutual benefit' is original to the current study. This principle is a further development of the reciprocity called for by Māori researchers at various fora including the Te Oru Rangahau Conference (Te Pūmanawa Hauora, 1999). Often when reciprocity is considered the nature and extent of the benefits of the research that accrue to the researcher(s) remain implicit. The mutual benefit principle emphasises the need to explicitly identify those benefits.

Empowerment

The next first-level Māori development research principle is empowerment. As a principle, empowerment is concerned with enhancing the capacity of Māori to gain a greater measure of control over those factors that determine their life and position in society. Empowerment is also consistent with the principles of independence and autonomy.

The label 'empowerment' has been utilised in a range of academic disciplines, in terms of the current study its use within development studies is most relevant. As discussed in Chapter Three empowerment can be perceived as a multi-level interacting construct that centres around three overlapping concerns – capacity building, increasing opportunities for control over one's future and changes in power relationships in favour of the less powerful (Friedmann, 1992; Freire, 1990; Green & Wilson, 1989; Keiser, 1997; Schuftan, 1996; Zimmerman, 2000).

Control

Research should contribute to increased opportunities for Māori to control their own affairs and determine their own future. The principle of control implies that Māori should provide leadership at all levels and in all aspects of research. That does not preclude a role for non-Māori, but recognises that ultimately Māori development is about Māori leadership, often in collaboration with others (Smith, 1997; Tuhiwai-Smith, 1999). Inherent in the principle of control is the concept of accountability. Researchers should be accountable to Māori for the attainment of research outcomes or lack thereof (Tuhiwai-Smith, 1999). How that accountability is operationalised requires clear protocols and processes (Te Pūmanawa Hauora, 1999).

Within the New Zealand context Māori are currently disadvantaged in terms of access to power (Ratima, 2001). Research has the potential to contribute to the more equitable distribution of power in New Zealand society, and therefore to a change in power relations in favour of Māori.

The term 'control' is frequently used within the empowerment literature mentioned above. In terms of *Te Ihu Waka* 'control' is consistent with the empowerment literature but even more closely aligned with the themes identified by Māori development writers since the Hui Taumata in 1984 (see Bishop, 1994; Department of Māori Studies, 1995; Durie, 1996; Durie, 1998; Puketapu, 2000; Ratima, 2001).

Changes in Power Relationships

Māori are currently marginalized in terms of access to decision making within New Zealand society. The principle of changes in power relationships seeks to redress this imbalance. Importantly, it is not concerned with reducing the power of other New Zealand stakeholders; rather, the primary focus is on increasing Māori access to power and power sharing. From this perspective, power is an expanding commodity as opposed to a zero-sum commodity.

As mentioned above the phrase 'changes in power relationships' as used in *Te Ihu Waka* has its origins in development literature (Chambers, 1997; Friedmann, 1992; Green & Wilson, 1989) and is seen as a key component of empowerment.

Capacity Building

If as a result of being involved with research the Māori community's ability or skill base has increased in some way, then the research will be judged a success in terms of capacity

building. The Māori involvement mentioned here might be as research participants or as part of the RS&T sector workforce. In addition, Māori community involvement may facilitate the introduction of Māori community research participants into the RS&T workforce (Te Pūmanawa Hauora, 1999). Capacity building acknowledges the marginalised position of Māori and the need to enhance Māori capacity to participate in and benefit from New Zealand society.

The principle of capacity building has a dual focus. It is about increasing the skills and qualifications of Māori in all facets of the RS&T sector from research design, fieldwork, and analysis, through to management and policy making (HRC, 1998). There is the expectation that consistency with this principle will enable Māori to move into research leadership roles and high-level decision-making positions. But the focus is not solely on the research workforce. Successful capacity building will facilitate higher Māori participation in the high-value knowledge-based arenas such as ICT and the sciences (FRST, 2002b).

'Capacity building' has long been recognised as a component of empowerment in the development studies literature (see Friedmann, 1992; Green & Wilson, 1989; Keiser, 1997; Schuftan, 1996; Zimmerman, 2000). Since the 1990's New Zealand Government Māori development policy has also recognised the importance of 'capacity building' (Loomis, 1998; Loomis, 2000b; Love, 1999; NZCER, 2000).

This principle is linked closely with the principles of collective Māori good and common Māori good in that capacity building is a pre-requisite if Māori, both collectively and as individuals, are to become self sufficient.

Advancement

Underlying the concept of Māori development is the notion of positive advancement, that is, progress by Māori, on their own terms, towards realising their aspirations (Durie, 1998; Ratima, 2001). In the context of this thesis, advancement is about building on established foundations and going forward. Research that does not ultimately lead to advancement will make a less obvious contribution to Māori development (Durie, 1999c).

The term 'advancement' as used in *Te Ihu Waka* is reminiscent of themes that emerged from Māori development fora during the mid 1990's (see Chapter Three). Its scope is broader than Cunningham's (1999b) highly focussed use of the term where equity with the mainstream population is emphasised as a parallel goal to Māori development.

Knowledge Generation

Māori society was founded on the generation and elaboration of knowledge (Tuhiwai-Smith, 1999). Colonisation, however, resulted in the disruption of Māori knowledge systems. Despite this, Māori continue to be concerned with the retention and development of traditional knowledge and the elaboration of new knowledge that is distinctly Māori and informs Māori development processes (Cunningham, 1999a; Durie 1999c). The combination of using the old and bringing new knowledge into play is of major significance but not without challenges.

While knowledge generation is seen as the primary reason for carrying out research, this thesis suggests there is also an applied dimension: there must be positive effects for Māori development. And although knowledge is critical to Māori development efforts, it is not the sole driver of Māori development. Knowledge should be used to inform and guide Māori development, to provide evidence for wise decision-making.

The use of the term 'knowledge generation' is consistent to that suggested at the conclusion of the Te Oru Rangahau Conference (Durie, 1999c) and the sentiments presented at the Knowledge Wave Conference in 2001 (Knowledge Wave Trust, 2001).

Synergy

In their development efforts, Māori expend significant resources, both human and financial, in the local and national arena (NZIER, 2003). Synergy is about using those finite resources in an efficient manner. At one level within the RS&T sector, synergy amounts to the co-ordination of efforts within and between different institutions. At a higher Māori development level, the same connotation applies: Māori efforts must be co-ordinated to achieve Māori development goals efficiently.

The antithesis to the synergy principle is the state of entropy where Māori development efforts are uncoordinated or, worse still, are fragmented by competitive and antagonistic practices such as litigation. An example of Māori development entropy is the protracted court action that took place following the Treaty of Waitangi Fisheries Settlement in 1992. This ongoing debate caused major divisions throughout Māoridom (Durie, 1998).

Entropy should not be confused with a lack of effort being expended by Māori in their development efforts. Rather, entropy is seen as a lack of effective use of Māori energy for Māori development purposes. In terms of research activities the synergy principle dictates

that coordination and cooperation between Māori organisations should rank higher than competitive aims between researchers or research agencies.

In general usage the term 'synergy' is derived from the Greek word 'sunergos' meaning 'working together' (Pearsall, 1999). In the corporate and public sector 'synergy' implies co-operation to achieve common goals. The use of this term within *Te Ihu Waka* is consistent with both of the above examples.

Adaptation

A central characteristic of Māori development efforts has been the capacity to adapt to change. This quality will continue to be important as New Zealand continues to take its place within the global society. Research should enhance the capacity of Māori to adapt to change in a positive and proactive way.

It is critical to note that this principle is not in tension with the use of traditional Māori knowledge or the principle of secure Māori identity (see below). In fact, adhering to these two principles in conjunction will not only ensure the 'retention of a Māori heart' (Department of Māori Studies, 1995) but could possibly lead to successful innovation.

The use of the term 'adaptation' in the context of *Te Ihu Waka* is in line with the Māori development theme of 'A changing world' identified at Hui Whakapūmau (Department of Māori Studies, 1995) where change was seen as inevitable and Māori must adapt effectively to change, and benefit from new circumstances.

Value-added Resources

Up until quite recently, Māori economic development efforts were focussed strongly on the management of primary resources such as land, forests, and fisheries. Māori are attempting to enter the global knowledge economy where knowledge-based resources are also important, adding value to the more conservative focus on natural resources. Further, there are examples where resources, such as the third-generation radio frequencies, emerging from the knowledge economy could well be considered part of the modern Māori estate (Durie, 2002a). Conformity with the value-added resources principle will entail two distinct courses of action. The first is encouraging Māori to shift from producing high-volume, low-value commodities to value-added products from their natural resources. The second course of action will be to focus Māori economic development efforts into knowledge-based high-value industries (MoRST, 1999a).

Usage of the term 'value-added' is not specific to Māori development writing nor is its use attributable to any one Māori development writer.

Māori Integrity in a Global Society

At the beginning of the second millennium there are reminders that humankind is entering a new era of globalisation trends and increased capacity of ICTs. If current literature and media reports are accurate, the global knowledge society is bound to expand (ITAG, 1999). For Māori this presents many opportunities along with some risks (Durie, 1999a). The challenge of the principle of Māori integrity in a global society is to take advantage of the opportunities and manage the risks.

'Māori integrity in a global society' is an original term that draws on the notion of maintaining Māori social and cultural practices, albeit in different forms in the era of the global knowledge society.

Global Alliances

Global alliances are taking on a greater prominence as New Zealand generally, and Māori in particular, seek a place in the global knowledge society. Māori have already forged strong links with other indigenous peoples, and have enjoyed the mutual benefits accrued from the exchange of experience and knowledge (Tuhiwai-Smith, 1999). However, if Māori are to realise their aspirations those links will need to expand to include a multitude of players in the global knowledge society (Durie, 1999c). The flow of information should be two-way, whereby external experience and knowledge can inform the approach of Māori while Māori development ideas and concepts can contribute to the approaches of groups outside of New Zealand. Similarly to the principle of adaptation, the combination of Māori knowledge with other forms of knowledge has the potential to lead to successful innovation in the global knowledge society.

The term 'global alliances', as used within *Te Ihu Waka* is novel. This principle is based on the 'universality' Māori development outcome identified at Te Oru Rangahau (Te Pūmanawa Hauora, 1999) with two key points of difference. First, 'global alliances' emphasises the two-way flow of ideas and information between Māori and the global community rather than concentrating on the need for Māori to access offshore innovation. Second, arrangements with all types of organisations such as private sector groups are encouraged in addition to the focus on relationship building with other indigenous groups.

Secure Identity

What constitutes a secure Māori identity will change over time, and there is currently no single agreed understanding of the concept of Māori identity. However, there are a number of generally accepted characteristics including: personal perceptions (e.g., self-identification as Māori), cultural heritage, and access to Māori institutions such as marae (Durie, Black, Christensen, Durie, A., Potaka & Fitzgerald, 1995; Karetu, 1990; Walker, 1996).

The secure identity principle dictates that uniquely Māori considerations underpin Māori development. Māori development efforts therefore should at least be consistent with Māori cultural beliefs and values, and research should not lead to any diminution of Māori world-views.

'Secure identity' as a term has been used frequently in Māori development literature over the years (Department of Māori Studies, 1995; Durie, Black, Christensen, Durie, A., Potaka & Fitzgerald, 1995; Karetu, 1990; Te Pūmanawa Hauora, 1999; Walker, 1996). The use of the term in *Te Ihu Waka* recognises that a secure identity is a central tenet of Māori development.

Diversity

Māori are not a homogeneous group; they are diverse in terms of social, cultural, economic, political and geographical realities (Durie, 1995). Research should not focus on one type of Māori reality, or expression of Māori identity, or geographic location. Rather Māori-specific research should be cognisant of and relevant to the diversity of Māori in today's global context. It should strengthen the position of Māori across diverse realities in the global society. Not all Māori are active in tribal endeavours, or play roles on the marae, or send their children to Kōhanga Reo. Research cannot assume a single reality for Māori in modern times (Te Pūmanawa Hauora, 1999).

The term 'diversity' as used in *Te Ihu Waka* is based on Durie's concept of diverse Māori realities (1995). Since its emergence this construct has been seminal in Māori development writing and therefore is pivotal to *Te Ihu Waka* as a Māori development framework.

The Application of the Framework

As noted earlier, *Te Ihu Waka* can be used before research activity as a planning tool, during the research in a monitoring capacity, or after the completion of research in a retrospective

manner. No adjustment to the Framework is required to enable its use in any of the three capacities.

Another major strength of *Te Ihu Waka* is that it can be applied at three levels within the RS&T sector: policy making, purchasing and provision. In its current form the Framework is designed as a generic tool, but to be applied specifically to policy, purchasing or provision, three attributes must be considered. First, differing assumptions are made in applying the Framework for each of the given contexts. Second, the nature of the Framework's three assessment platforms (Process, Output and Outcome) differs for each context. Third, the scope of the assessment made at the intersection of each assessment platform with the Māori development research principles will differ for varying contexts.

Application to Research Policy Making

From a policy-making perspective, the basic assumption is that Māori-specific research policy should be aligned with high-level Government priorities. For example, a current high-level Government priority is the repositioning of New Zealand as a knowledge society. Therefore Māori-specific research policy should be consistent with the higher level priority by strongly emphasising research activities with a knowledge-society focus.

The assessment platforms are concerned with the policy development procedure (Process), actual policies that are developed (Output), and the likely impact of those policies on Māori society (Outcome).

A policy making-specific process assessment in terms of the principle of Māori Control could be the extent of Māori input into policy development. For instance, were meaningful consultations held with Māori? Was Māori-specific expertise drawn on in the policy development process? Were Māori given the opportunity to provide input on draft policy documents? Was the policy under consideration critiqued in terms of responsiveness to Māori? Table 4 (below) provides this example of applying *Te Ihu Waka* to research policy making.

Table 4 Application of Te Ihu Waka to research policy making

First-level Principles	**Second-level Principles**	**Process** *Policy Development Procedure*	**Output** *Policies*	**Outcome** *Likely Impact of Policy on Māori*
Empowerment	*Control*	Extent of Māori input into policy		

Application to Research Purchasing

The assumption at the research-purchasing level is that the basic quality expectations of the Māori-specific research being purchased will be assessed through usual mechanisms. For example, the basic quality expectation of scientific merit will be assessed as being met by some other mechanism. On the other hand, research that does not address end-user aspirations is likely to be seen as having less scientific merit. If the Framework is used before research is purchased, it is also assumed the purchaser is operating in a competitive environment of limited resources, and therefore the Framework should help the purchasing process ensure the most effective and efficient use of available resources.

From a purchasing perspective, the assessment platforms represent the research purchasing procedure (Process), the research that is purchased (Output) and the effects of the funded research on Māori (Outcome).

A purchasing-specific output assessment in terms of the global alliances principle could be the number of projects funded that are joint ventures between Māori and groups outside New Zealand, including other indigenous peoples. This assessment could be further developed to examine the merits of any formalised legal agreement between the international partner and local Māori groups. Other assessments would determine whether Māori retain ownership of intellectual property developed as a result of the project, or the potential for longer term alliances with the international organisation. Table 5 (below) demonstrates the application of *Te Ihu Waka* to research purchasing.

Table 5 Application of Te Ihu Waka to research purchasing

First-level Principles	**Second-level Principles**	**Process** *Research Purchasing Procedure*	**Output** *Research Purchased*	**Outcome** *Likely Impact of Purchased research on Māori*
Māori Integrity in a Global Society	*Global Alliances*		Number of projects funded that are joint ventures between Māori and international groups	

Application to Research Provision

The major assumption made at the provision level is that research will be undertaken in an ethical manner even though the researcher and the research participants may have different, and at times competing agendas.

The provision-specific assessment platforms are: the research method employed (Process), research products such as publications, reports, hui, seminars and presentations (Output), and effects on Māori society (Outcome).

A provision-specific outcome assessment in terms of the capacity building principle could be the level of Māori research expertise developed as a result of the research method employed. Were Māori actively involved in the research design? Were any of the research participants (or people from their community) incorporated into the research team? Were any Māori trained in research methods at an introductory level? Was any advanced training undertaken by Māori members of the research team (e.g., doctoral fellowships)? Table 6 (below) illustrates the use of *Te Ihu Waka* to assess the contribution of research provision to Māori Development.

Table 6 Application of Te Ihu Waka to research provision

First-level Principles	Second-level Principles	Process *Research Method Employed*	Output *Research Products*	Outcome *Likely Impact of Research on Māori*
Empowerment	*Capacity Building*			Increase in Māori research expertise

Practical Application of the Framework

The *Oranga Kaumātua* Study (Te Pūmanawa Hauora, 1997) is used to illustrate the practical application of *Te Ihu Waka* to an actual research project. As the project was undertaken in 1996, the Framework is employed in its capacity as a retrospective assessment tool. The author was involved in the project as a member of the research team; therefore *Te Ihu Waka* will be used to assess the contribution of *Oranga Kaumātua* to Māori development from the research provision perspective.

Background and Rationale for the Oranga Kaumātua Study

Te Pūmanawa Hauora, the Māori health research unit based at the School of Māori Studies at Massey University, undertook *Oranga Kaumātua,* a study into the health and well-being of older Māori people, in 1996. The Study was funded by Te Puni Kōkiri and the Ministry of Health.

In 1996, there were a number of reasons that made Oranga Kaumātua a timely research project:

- Māori have an ageing population structure;
- older Māori people suffer disproportionate ill-health compared with non-Māori;
- kaumātua will experience the impact of changing whānau structures, changes in the way the State provides for older people, and changes in the provision of health care;

- the Prime Ministerial Task Force on Positive Ageing was at the time developing recommendations for Government policy direction for older people;

- there was a dearth of reliable information about the situation of kaumātua on which to base policy and planning at local and national levels for both Māori and the State.

Oranga Kaumātua intended to provide a picture of the status of contemporary older Māori people to help planners and policy makers at Government and iwi levels develop sound policies for the increasing numbers of Kaumātua (older Māori people, for the purposes of *Oranga Kaumātua* over 60 years old). The support of Te Puni Kōkiri and the Ministry of Health as project funders provided a direct channel for input of study findings into the Government policy development process. Similarly, the involvement of Māori community organisations for the duration of the project provided a mechanism by which study findings could be incorporated into iwi policy development processes.

Nearly 400 Kaumātua, resident in 10 regions throughout New Zealand, were recruited and subsequently interviewed by community-based researchers. More than 50 community-based Māori interviewers, along with 10 'regional coordinators' were trained and utilised for *Oranga Kaumātua.*

Applying Te Ihu Waka to the *Oranga Kaumātua* Study

When *Te Ihu Waka* is applied at the provision level, the key assumption is that research will be undertaken in an ethical manner. The *Oranga Kaumātua* study was granted ethical approval from the Massey University Human Ethics Committee. Gaining ethical approval required the proposed study method and interactions with research participants to be seen by the Committee as complying with the University's ethical standards.

The assessment platforms used at the research provision level are: the research method employed (Process), research products such as publications, reports, hui, seminars and presentations (Output), and effects on Māori society (Outcome).

Employing *Te Ihu Waka* at the provision level with the relevant assessment platforms in place allows a detailed assessment of the contribution *Oranga Kaumātua* made to Māori development. The assessment is presented in Table 7 (below).

Table 7 Te Ihu Waka as applied to the Oranga Kaumātua Study

First-level Principles	Second-level Principles	Process *Research Method Employed*	Output *Research Products*	Outcome *Likely Impact of Research on Māori*
Maximum Benefit	*Collective Māori Good*	Māori collectives utilised to recruit respondents and employ fieldworkers	Balance between national and local level achieved by producing reports for both	Improved kaumātua health, higher level of Kaumātua particpation in Māori organisations
	Common Māori Good	Sample biased toward older Māori that had active links with Māori organisations	The national- and regional-level reports increased public awareness of the health and well-being issues facing kaumātua	Increased cognisance of those Māori who do not participate in Māori organisations
	Mutual Benefit	Research team and community organisations entered written agreement detailing benefits and responsibilities of parties	Negotiations between the research team and the Māori organisations deemed regional specific reports were to be prepared and then presented at hui in each region	Potential increased for high level arrangements between Māori organisations involved in project and the University system
Empowerment	*Control*	Initial research topic identified at Māori community hui. Māori community organisations involved from outset of project	Regional specific reports enabled Māori community organisations to plan (and therefore improve their control over) arrangements for their elderly	Increased sense of ownership of research process, enhanced ability to plan for future generations
	Changes in Power Relationships	Community organisations and individuals had power to withdraw from study at any time if they so wished	Reports provided empirical evidence for local level providers to negotiate with health funders	Power transferred from State policy makers to Māori community organisations
	Capacity Building	Over 50 fieldworkers and 10 regional co-ordinators trained in research techniques	Research team gained experience in presenting research findings directly to Māori community	Increased level of Māori research expertise, heightened Māori involvement in research
Advancement	*Knowledge Generation*	Translation of SF-36 (health self assessment instrument) into Māori	Numerous findings and recommendations regarding the health and well-being of kaumātua made in reports	Augmented health services for older Māori, improved health status and quality of life for older Māori
	Synergy	Research hui bought together groups from neibouring regions facilitating Māori networking	The national and regional research reports enable efforts across the country to be co-ordinated	Enhanced co-operation between Māori health providers
	Adaptation	Project heightened Māori community awareness of proactive research	Report fed into long-term Government and iwi planning	Government and iwi better prepared to cater for the aging Māori population
	Value-added Resources	Increased awareness of involvement of older Māori in resource management	Kaumātua involvement in Māori resource management gauged	Improved involvement of older Māori in the management of Māori resources
Māori Integrity in a Global Society	*Global Alliances*	Study used SF-36 an internationally validated health self-assessment instrument	Study report made available to visiting indigenous health researchers	Strengthened relationships with indigenous health researchers
	Secure Identity	Interviews carried out in Māori if requested, koha custom upheld by interviewer offering a small koha of food to the participant	'Kanohi ki te kanohi' custom upheld, with research team presenting results in person back to Māori community	Better understanding of attitudes of older Māori towards Māori language and cultural roles
	Diversity	Sample drawn from geographically diverse regions throughout New Zealand	Ten regional reports tailored for local context, produced	Raised awareness of issues facing kaumātua without Māori language or cultural skills.

On inspection of Table 7 it can be concluded that *Oranga Kaumātua* project did contribute to Māori development in a number of ways. The entire research team was Māori and consequently the benefits that accrued to the research team benefited Māori.

In general, the assessment of *Oranga Kaumātua* revealed a high level of consistency with the Māori development research principles across all three assessment platforms. There were three instances where the assessment was highly favourable. The first and perhaps most significant instance was in terms of common Māori good, where the public's awareness of the health and well-being issues of kaumātua was raised at the local and national level. The second success highlighted by the assessment was the considerable capacity building that occurred as a result of *Oranga Kaumātua.* This was especially positive because of the large numbers of people receiving training and the fact that they were largely not university qualified. The third highlight of the assessment was the high level of Māori control retained throughout the project. The initial suggestion for a study on the health and well-being of older Māori stemmed from a community-based Māori health hui. The Māori community organisations, including kaumātua themselves, also had meaningful input into methodology development and subsequent research management through the regional coordinators.

The assessment did, however, identify one Māori development research principle where *Oranga Kaumātua* was found not to contribute to Māori development. The sampling bias toward kaumātua who had active links with the Māori community tended to exclude those kaumātua who were not closely connected with the wider Māori community. This was found to being strongly contrary to the principle of common Māori good, where Māori individuals (rather than collectives) are taken into account. On a positive note, this result did contribute to a constructive outcome because the abscence of Māori without active links to the Māori community was acknowledged as a deficit.

The use of the *Te Ihu Waka* Framework has shown that the *Oranga Kaumātua* study did contribute to Māori development in a meaningful way, especially in terms of the process undertaken and the outputs produced. However, consistent with earlier statements regarding the complexity of measuring outcomes, it is difficult to determine conclusively whether the identified outcomes of the *Oranga Kaumātua Study* were achieved. Also, if the outcomes were realised it is hard to attribute them solely to *Oranga Kaumātua.* Furthermore, if the outcomes were attained it not easy to determine the degree to which they were met. Additional work to

develop indicators for *Te Ihu Waka* would enable more in-depth assessment of research activities.

Indicators for *Te Ihu Waka*

When applying *Te Ihu Waka*, the focal point of assessment is at the intersection of each research assessment platform with each Māori development research principle. Currently, the assessment is essentially a qualitative statement that describes the extent to which the process, output or outcome of the research activity is consistent with the given Māori development research principle.

As noted above, a more in-depth assessment could be achieved if indicators were developed for each of the intersections. That would total 39 indicators. Then, if a specific set of indicators were developed for research policy making, research purchasing and research provision, 117 indicators would be required. Furthermore, if distinct indicators were necessary for all three points in time when *Te Ihu Waka* can be used, i.e. before, during and after research is undertaken, 351 separate indicators would be needed.

Although the development of a complete set of indicators for *Te Ihu Waka* is beyond the scope of the current study, it is useful to note that those indicators could use an absolute (yes/no), or a relative (for example a scale of 1-10) system of assessment.

The Framework as a Tool for Comparative Analysis

The application of the Framework (in conjunction with indicators) in each of the three contexts would enable comparisons to be made of the contribution to Māori development of different research policies, research purchasing strategies, and research projects at the provision level.

Consideration of the relative merits of different policies, purchase strategies and projects would then entail comparing the degree of consistency with each indicator. There is also scope to assign different weightings to the principles and platforms in accordance to the priorities of the party carrying out the assessment.

The Framework at the Interface between the RS&T Sector and Māori

A key strength of the *Te Ihu Waka* Framework is that it is located at the interface between the contemporary RS&T sector and Māori. The Framework can be conceptualised at the interface in two ways. First, the Framework identifies sites where the relationship is manifest, i.e. the three Assessment Platforms (Process, Output and Outcome). And second, the Framework provides parameters to consider the nature and extent of the relationship through the Māori Development Research Principles.

Another facet of the Framework's location at the interface is that it can be used by Māori organisations much in the same way as described above for Crown organisations. Māori organisations are able to use the Framework in their own contexts of research policy-making, purchasing, and provision, albeit in slightly different ways.

At the policy-making level Māori can use the Framework as a touchstone. As their own research policies are developed, the Framework can be used to ensure consistency with the Māori research development principles, and can be prioritised according to their specific situation.

In terms of Māori purchasing research, Māori could employ the *Te Ihu Waka* Framework to guide decision making on purchasing research from external providers such as universities. The Framework could be used on a project-by-project basis or more expansively by some of the larger Māori organisations for a whole research portfolio.

At the provider level, Māori organisations contemplating carrying out research themselves can use the Framework as a guide to ensure their responsibilities to Māori research participants and the Māori community at large will be fulfilled. If a Māori organisation is deciding whether to opt for an externally initiated research project the Framework can act as a checklist during negotiations with the external party.

Summary

Drawing on the literature and the survey of experts, the *Te Ihu Waka* Framework was presented. The Framework has two dimensions; one consisting of three research assessment platforms, and the other a series of Māori development research principles. *Te Ihu Waka*

provides a mechanism to assess the contribution that various research activities make to Māori development.

Using *Te Ihu Waka* to assess the *Oranga Kaumātua* Study it was found that the Study contributed meaningfully to Māori development in a number of ways. Construction of suitable indicators would enable *Te Ihu Waka* to provide a more in-depth analysis. Finally, in conceptual terms, the Framework can be located at the interface between the RS&T sector and Māori in two ways: by locating sites where the interaction takes place, and because the utilisation of the Framework by Crown and Māori agencies alike.

CHAPTER SEVEN

CONCLUSIONS

'Ki te hoe!'[10]

This thesis set out to address the central research question 'How can the contribution of research to Māori development be assessed?' The findings from the study, and the emergent Framework point to a potential for synergy between Māori world-views and science. The culture underlying research, science and technology is not, as often supposed, the antithesis of Māori aspirations for positive development. This thesis concludes that the contribution of research, science and technology to Māori development can be significant, and measurable through the application of the Framework, *Te Ihu Waka.*

The construction of *Te Ihu Waka* was informed by the literature and a survey of Māori research experts. It is a two dimensional framework consisting of three research assessment platforms, four high-level principles and 13 consequential lower level principles. The Framework provides a method for the systematic assessment of research activities in terms of their impact on Māori development. Research activity undertaken in the contemporary New Zealand RS&T sector (be it research policy development, research purchasing or research provision) can therefore be assessed according to its contribution to the realisation of Māori development aspirations.

The Framework's utility was tested and its usefulness as a mediator between scientific method and Māori aspirations was confirmed.

Te Ihu Waka is located at the interface between Māori perspectives and the contemporary New Zealand RS&T sector, and in that sense lies between two worlds, each underpinned by knowledge systems and intrinsic values. The location of *Te Ihu Waka* at this interface is similar to many contemporary Māori development initiatives situated in the 'third space'

[10]An idiom uttered to call kaihoe (paddlers) to prepare to commence paddling. The intended meaning is that although the current journey has just been completed, a new voyage has just begun.

(Meredith, 1999) at the interface between Te Ao Māori, the Māori world and Te Ao Whānui, the world at large (Durie, 2003).

The interface is characterised by discrepancies between world-views, and a fundamental tension between knowledge systems underpinning mātauranga Māori, and those that form the foundations of Western science. However, that tension is not necessarily an insurmountable barrier. There may well be a high level of demarcation and negotiation of power and identity (Jahnke, 1996), but the space can be navigated if there are appropriate protocols and instruments.

At the entry into the global knowledge society of the 21st century, Māori aspirations for development are not entirely realised by current arrangements within New Zealand's RS&T sector.

While an independent mātauranga Māori research agency could provide a dedicated focus for research into mātauranga Māori, creating an intellectual environment within which Māori knowledge could be elaborated, in the current environment navigational aids are needed so that the space between systems of knowledge can be negotiated and understood without overt collisions.

Te Ihu Waka is posited as a vehicle that can aid the negotiation of the third space so that research policies and practices can be expressed alongside Māori aspirations. Through that process it becomes possible to understand the relationship between the two, and the contribution that conventional research can make to Māori development.

'He nui maunga, e kore a taea te whakaneke; he ngaru moana, mā te ihu o te waka e wāhi.'[11]

'Manini waka! Hi!

Tere waka! Hi!..'[12]

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[11] "A big mountain cannot be moved along, but a great ocean wave can be pierced by the prow of a canoe." 'The solution of some problems is as difficult as moving a mountain. Others, however, can be solved as easily as the canoe parts the wave with the right vessel, i.e. the instrument, method or technology' (Mead and Grove, 2001, p. 102).

[12] 'Let the waka slide freely! Yes! Let the waka glide speedily! Yes!' An excerpt from the waiata *Manini waka* it is used to energise paddlers, particularly at the beginning of the journey.

GLOSSARY OF MĀORI TERMS[13]

ahi kā	occupation rights
Aotearoa	New Zealand
hapū	sub-tribe, clan
hui	gathering, meeting
iwi	tribe
kāhui	assemblage
kanohi	face
karakia	prayer, chant
kaumātua	elders
kaupapa	theme
Kete Aronui	basket of sacred knowledge
Kete Tuatea	basket of ancestral knowledge
Kete Tuauri	basket of ancient knowledge
koha	gift, present
kotahitanga	unity
kupu	word
mana	effective authority, prestige
manu	bird
Māori	indigenous people of New Zealand

[13] Definitions are given in the context of this thesis and may not be generically applicable.

maunga	mountain
marae	meeting area of whānau
mātāwaka	kinsfolk from ancestral canoe
mātauranga	information, knowledge, education
mātauranga Māori	Māori knowledge
muru	plunder, confiscate (property)
oranga	healthy, lively
Pākehā	person of predominantly European descent, Caucasian
Papatūānuku	primal Earth Mother
Ranginui	primal Sky Father
raupatu	conquer, seize land, confiscate land
reo	voice, speech, language
Tāne-nui-a-rangi	an offspring of Papatūānuku and Ranginui
taura here	link to tribal homeland
Te Puni Kōkiri	Ministry of Māori Development
tino rangatiratanga	sovereignty absolute / kingdom
tohunga	skilled person, expert, specialist, priest
tūrangawaewae	place of origin
tūturu	permanent, original
waiata	song, chant
waka	canoe, vessel
wānanga	educational course, Māori tertiary educational institution
whakapapa	genealogical table, genealogy, cultural identity

whakatauākī	saying, proverb, aphorism, maxim
whānau	family group, extended family
whare wānanga	university, school of higher learning
whenua	land

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Appendix One

Survey
Questionnaire

Massey University
COLLEGE OF HUMANITIES & SOCIAL SCIENCES

Te Pūtahi-ā-Toi
School of Māori Studies
Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099
or (06) 350 5799 then extn no
Facsimile: 64 6 350 5634

Assessing The Contribution Research Makes To Māori Development

Questionnaire

THIS SECTION TO BE REMOVED AND STORED SEPARATELY

Interview # __ __

Name

Date

Location

Permission to tape interview?

1. What does Maori development mean to you?

2. What do you consider are the central underlying principles of Maori development?

3. Is there a relationship between Māori development and research? If so what is that relationship?

4. What do you consider is the purpose of research generally?

5. What do you consider is the purpose of research involving Maori?

6. What are the key issues that should be considered in research involving Maori?

7. What should the relationship be between the researcher and research partipants?

8. How should research contribute to Maori Development?

9. What do you consider are the underlying principles or tenets of research that will contribute to Maori development?

10. How would you assess the contribution that a research project makes to Maori development?

11. What are the stages at which the contribution that a research project makes to Maori development should be assessed?

12. Who should benefit from research that involves Maori?

13. How can we ensure that Maori in general, benefit from both small and large-scale research projects?

14. How do you know when a research project has been successful?

15. Are there links between research involving Maori and research involving other indigenous peoples? Please explain.

16. Are there links between research involving Maori and other research outside of New Zealand? Please explain.

17. Are there any other comments you wish to make?

Appendix Two

Survey
Consent form

Massey University
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Telephone: 64 6 356 9099
or (06) 350 5799 then extn no
Facsimile: 64 6 350 5634

Assessing the Contribution Research Makes To Māori Development

CONSENT FORM

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researcher on the understanding that my name will not be used without my permission.

(The information will be used only for this research and publications arising from this research project).

I agree/do not agree to the interview being audio taped.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed: .....

Name: .....

Date: .....