

Social Policy Journal of New Zealand

Issue 36 August 2009

Measuring Ethnicity: An Introduction to the Theme

Tallying Tribes: Waikato-Tainui in the Census and Iwi Register

A "Main" Ethnic Group?: Ethnic Self-Prioritisation among New Zealand Youth

How Much and for Whom Does Self-Identified Ethnicity Change Over Time in New Zealand? Results from a Longitudinal Study

In Search of Ethnic New Zealanders: National Naming in the 2006 Census

Who are We?: The Human Genome Project, Race and Ethnicity

Measuring Māori in Australia: Insights and Obstacles

Prioritising Ethnic Data for Schools: Who Are We Missing?

Ethnicity, Identity and Public Policy: Critical Perspectives on Multiculturalism by David Bromell

Simple, Effective and (Relatively) Inexpensive: New Zealand Retirement Provision in the International Context

The Distributional Impact of Kiwisaver Incentives

KiwiSaver: A Model Scheme

Children in Families Supported by Main Benefits: An Update

Ethnic Identity and Exposure to Maltreatment in Childhood: Evidence from a New Zealand Birth Cohort

Tackling the Effects of Neoliberalism? Integrating Services at Barnardos New Zealand

Changes in Structural Design in the New Zealand Social Services Sector

Household Economic Resources as a Determinant of Childhood Nutrition: Policy Responses for New Zealand

Reconciling True and Incurred Costs of Blindness in New Zealand

ISSN 1172-4382

CONTENTS

	<i>Page</i>
Foreword	iv
MEASURING ETHNICITY	
Measuring Ethnicity: An Introduction to the Theme <i>Paul Callister</i>	1
Tallying Tribes: Waikato-Tainui in the Census and Iwi Register <i>Julie Walling, Desi Small-Rodriguez and Tahu Kukutai</i>	2
A “Main” Ethnic Group?: Ethnic Self-Prioritisation among New Zealand Youth <i>Tahu Kukutai and Paul Callister</i>	16
How Much and for Whom Does Self-Identified Ethnicity Change Over Time in New Zealand? Results from a Longitudinal Study <i>Kristie N Carter, Michael Hayward, Tony Blakely and Caroline Shaw</i>	32
In Search of Ethnic New Zealanders: National Naming in the 2006 Census <i>Tahu Kukutai and Robert Didham</i>	46
Who are We?: The Human Genome Project, Race and Ethnicity <i>Paul Callister and Robert Didham</i>	63
MEASURING ETHNICITY – RESEARCH NOTES	
Measuring Māori in Australia: Insights and Obstacles <i>Paul Hamer</i>	77
Prioritising Ethnic Data for Schools: Who Are We Missing? <i>Frances Leather</i>	82
MEASURING ETHNICITY – BOOK REVIEWS	
Ethnicity, Identity and Public Policy: Critical Perspectives on Multiculturalism by David Bromell <i>Reviewed by Karen Baehler</i>	88
<i>Reviewed by Cluny Macpherson</i>	93
KIWISAVER	
Simple, Effective and (Relatively) Inexpensive: New Zealand Retirement Provision in the International Context <i>Geoff Rashbrooke</i>	97
The Distributional Impact of Kiwisaver Incentives <i>John Gibson, Chris Hector and Trinh Le</i>	111
KiwiSaver: A Model Scheme <i>Alison O'Connell</i>	130

RESEARCH PAPERS

Children in Families Supported by Main Benefits: An Update <i>Moira Wilson and Daniel Soughtton</i>	142
Ethnic Identity and Exposure to Maltreatment in Childhood: Evidence from a New Zealand Birth Cohort <i>Dannette Marie, David M Fergusson and Joseph M. Boden</i>	154
Tackling the Effects of Neoliberalism? Integrating Services at Barnardos New Zealand <i>Hal B. Levine</i>	172
Changes in Structural Design in the New Zealand Social Services Sector <i>Judy Whitcombe</i>	183
Household Economic Resources as a Determinant of Childhood Nutrition: Policy Responses for New Zealand <i>Mat Walton, Louise Signal and George Thomson</i>	194
Reconciling True and Incurred Costs of Blindness in New Zealand <i>A. Jonathan R. Godfrey and Deborah M. Brunning</i>	208

FOREWORD

Issue 36 of the Social Policy Journal of New Zealand contains a major theme on Measuring Ethnicity, and the guest editor for these papers is Paul Callister from Victoria University of Wellington. This issue also includes a theme on KiwiSaver, a paper based on data from the Christchurch Health and Development Study, and research papers on a range of topics, including social welfare benefits, the social services sector, childhood nutrition and the costs of blindness.

Nearly half of Issue 36 is devoted to papers, research notes and book reviews on the theme of Measuring Ethnicity. Paul Callister's "An Introduction to the Theme" describes how these papers came to be. There are five main issues papers. The first, by Julie Walling, Desi Small-Rodriguez and Tahu Kukutai compares Waikato-Tainui iwi registration data with Census data and recommends that in future the Census question should include an iwi registration prompt.

Tahu Kukutai and Paul Callister look at the increasing proportion of young people who identify with multiple ethnicities, and explore how their general willingness to pick their "main" ethnic group can potentially help us better understand multiple ethnicity. Drawing on longitudinal data from SoFIE, Kristie Carter, Michael Hayward, Tony Blakely and Caroline Shaw, of Otago University's Health Inequalities Research Programme, explore changes in self-defined ethnic identity over time; they determine several interesting predictors of changing ethnic self-identification, one of which is having poorer self-rated health.

According to the article by Tahu Kukutai and Robert Didham, people are increasingly choosing to identify "New Zealander" as one of their ethnicities. This includes people who previously would have described themselves as "New Zealand European", as well as people of other ethnicities, such as Maori, who are choosing the term "New Zealander" instead of or as well as other ethnic identities – and the authors explore this pattern in the context of parallel trends in Canada and Australia. In the last of the main Measuring Ethnicity papers, Paul Callister and Robert Didham use the findings of the Human Genome project as a launching point to compare cultural and biological constructions of the concepts of race and ethnicity.

The Measuring Ethnicity theme also includes research notes and book reviews. Paul Hamer discusses the challenges to measuring Māori in Australia, and why it is worthwhile making the effort. Frances Leather describes how prioritising ethnicity data from secondary schools leads to significant undercounting of Pasifika and Asian students. Finally, Karen Baehler and Cluny Macpherson provide separate and independent reviews of a book by David Bromell, *Ethnicity, Identity and Public Policy: Critical Perspectives on Multiculturalism*, recently published by the Institute of Policy Studies at Victoria University of Wellington.

The theme on KiwiSaver comprises three papers. Geoff Rashbrooke's paper places the New Zealand system in an international context, where it can be seen to have multiple advantages. Alison O'Connell compares KiwiSaver to a similar scheme, one recently put into effect in the United Kingdom, and (in agreement with Geoff Rashbrooke's analysis) finds that KiwiSaver's simplicity is a major asset. The article by John Gibson, Chris Hector and Trinh Le evaluates the distributional effects of KiwiSaver and related tax incentives. (Their paper was accepted for publication in 2008, and some changes have been made to KiwiSaver in the

meanwhile. The changes are footnoted, but the analysis is of a slightly earlier snapshot of the system.)

The social service sector provides the theme for two articles in Issue 36. Judy Whitcombe explores the restructuring of the public sector over the 1980s and 1990s, the influence that this had on the implementation of social policy since then, and how this impact has been addressed in recent years. Continuing with concerns around outcomes of this restructuring and, specifically, its effect on social services, Hal Levine's article focuses on the response of a particular service provider, Barnardos, and its work towards reforming its organisation through service integration.

Several papers deal with the lives of children. Moira Wilson and Daniel Soughtton use the Ministry of Social Development's Benefit Dynamics Dataset to determine the likelihood of children at different ages to be included in a social welfare benefit. This updates a similar analysis published in the *Social Policy Journal of New Zealand* in 2002. The Christchurch Health and Development Study provides the longitudinal data for Dannette Marie, David Fergusson and Joseph Boden's study, which explores the associations between ethnic identity and exposure to childhood maltreatment.

Mat Walton, Louise Signal and George Thomson of the Health Promotion and Policy Research Unit, in the Department of Public Health at the University of Otago, examine the role of household economic resources and deprivation as a determinant of childhood nutrition and childhood overweight and obesity rates, and explore broad policy options to improve nutrition and reduce differences in overweight and obesity rates between ethnic and socio-economic groups. Issue 36 is rounded out with an exploration, by Jonathan Godfrey and Deborah Brunning, of both the incurred and the true costs of blindness faced by New Zealand's blind and vision-impaired community.

I think you will find this issue of the *Social Policy Journal of New Zealand* to be a stimulating and informative read.

Don Gray
Deputy Chief Executive
Social Sector Strategy

MEASURING ETHNICITY: AN INTRODUCTION TO THE THEME

Paul Callister
Associate Professor
Institute of Policy Studies
Victoria University of Wellington

Since the beginnings of the *Social Policy Journal of New Zealand* in 1993, ethnicity has featured prominently in discussions. For example, the first edition had an article by Tipene O'Regan and Api Mahuika discussing "modern day developments within Māori society" in relation to policy advice from the "Social Policy Agency". While many of the papers published in the journal have had ethnicity as one of the variables, or issues associated with ethnicity have been the main focus of particular articles, clear definitions of who belongs to particular groups and, more fundamentally, how groups are actually defined, are often not set out. However, from time to time there have been discussions as to what we actually mean by ethnicity. A recent example has been the 2004 paper by Tahu Kukutai entitled "The problem of defining an ethnic group for public policy: Who is Māori and why does it matter?" A concern about what ethnicity is actually telling us is not unique to New Zealand. There has been an explosion worldwide of research on the construction of identity, of which ethnicity is just one part.

This collection of research papers and research notes around the measurement of ethnicity is an attempt to bring together some recent thinking on the construction of ethnicity in a New Zealand context. The collection was promoted by a literature review carried out in 2008 for Statistics New Zealand. The review identified a range of work either underway or recently completed in New Zealand. Much of the research in this Social Policy Journal collection has been connected, in a variety of ways, to the Institute of Policy Studies. This includes two reviews of the book *Ethnicity, Identity and Public Policy* by David Bromell. David was seconded from the Ministry of Social Development to the Institute in 2007 in order to write this book. But relying on such a connection also means the collection inevitably misses other important research being undertaken in New Zealand and, thus, by no means represents all the variety of opinions regarding the construction of ethnicity in Aotearoa. It is therefore certainly not the last word on the conceptualisation and measurement of ethnicity in New Zealand. This will be an on-going process, both in New Zealand and worldwide.

**TALLYING TRIBES:
WAIKATO-TAINUI IN THE CENSUS AND IWI REGISTER**

Julie Walling¹
Waikato-Tainui Tribal Development Unit

Desi Small-Rodriguez
Waikato-Tainui Tribal Development Unit

Tahu Kukutai
Stanford University and Tahatū Research

Abstract

In the last decade iwi have begun to shift their focus from challenging the state to developing internal capacity. In so doing, the need for accurate, relevant data on iwi populations has been amplified. Using Waikato-Tainui as a case study, we examine the potential gaps between the statistical needs of iwi in a post-settlement context and the official data available to them. Our analysis uses two time points: 1996, shortly after the raupatu settlement, and 2006, the most recent census. Comparing data from the Waikato-Tainui register with those from the 1996 and 2006 censuses, we find significant variation in the parameters and characteristics of Waikato-Tainui in official statistics versus the tribe's own register. We discuss some of the implications of these gaps and suggest ways in which the statistical needs of iwi could be better met. Our key recommendation is that the existing iwi question in the census be expanded to prompt for tribal registration status. This change would better align official data with the concept of membership used by iwi authorities and yield data that are more relevant for their policy and planning needs.

INTRODUCTION

Since the early 1990s, iwi have made significant headway in their demands to be compensated for historical grievances relating to the alienation of land and other resources. The Waitangi Tribunal, a statutory body established in 1975 to make recommendations to the Government relating to breaches of the Treaty of Waitangi, has heard the majority of these claims.² Since 1989, 23 settlements have been successfully negotiated, with numerous other

¹ **Acknowledgments**

The authors warmly thank Marae Tukere and Hemi Rau, who have provided ongoing support for this research; Teeny Tukere and Moera Solomon, who generously shared with us their knowledge of the history and development of the register; and Whetu Simon, who extracted the tribal register data. The authors also thank two anonymous reviewers for their comments. Any errors of fact are ours alone.

Correspondence

Desi Small-Rodriguez, Waikato-Tainui Tribal Development Unit, Private Bag 542, Ngaruawahia, New Zealand 3742; or email DesiS@tainui.co.nz

² The Treaty, signed in 1840 between Māori tribes and the Crown, has been described as the Māori “magna carta” (McHugh 1991). Many contemporary debates relating to the Treaty have centred on differences between the Māori and English texts, and the key question of whether Māori ceded sovereignty or governorship. The jurisdiction of the Tribunal was initially limited to breaches that occurred after its establishment, but in 1985 it was given the power to hear claims retrospective to 1840.

claims in the process of being heard or settled (Office of Treaty Settlements 2008).³ Rather than proceed through the Waitangi Tribunal, some iwi, notably Waikato-Tainui, have opted to pursue negotiations with the Crown directly.

Regardless of the route taken, the settlement process has endowed iwi with significant resources in the form of natural resources (e.g. land, waterways, fisheries) and monetary compensation. As part of the process, a raft of iwi organisations have emerged as state-recognised actors to receive and distribute settlement monies and assume internal governance and policy-making functions. Post-settlement⁴ iwi such as Waikato-Tainui are now in a position to play an important role in improving the wellbeing of their members, both through internal capacity building and by influencing external policy formulation and service delivery. In order to do so effectively, however, iwi decision-makers need access to relevant and accurate information about their members. Without a reliable empirical knowledge base, decision-making runs the risk of being based on anecdote and misplaced judgement. In a post-settlement context we ask: How well placed are official statistics to meet the current and future needs of iwi?

Using Waikato-Tainui as a case study, we compare aggregate data from the tribe's own administrative register with data on Waikato-Tainui from the 1996 and 2006 censuses. Most, if not all, iwi organisations have established their own iwi registers of enrolled members, either as a precursor to, or a condition of, settlement. The Waikato-Tainui register was initially created in the 1950s as an electoral register managed by the Tainui Māori Trust Board. The board's successor, the Waikato Raupatu Lands Trust, is obligated to maintain the register as a requirement of the 1995 settlement with the Crown for the wrongful confiscation (raupatu) of tribal lands in the 1860s.⁵ Iwi registers have also been created to meet the requirements of the Māori Fisheries Act 2004, which requires that registered population numbers be taken into account when determining the settlement quantum.⁶

By comparing Waikato-Tainui register data with data from the census, our goal is to illustrate the potential gaps between the statistical needs of iwi in a post-settlement context, and the official data available to them. In so doing we pay particular attention to the ways in which iwi affiliation is conceptualised, measured and defined in the census, and how these features of tallying the tribe may be at odds with the criteria and processes used by iwi themselves. As the nation's most comprehensive statistical stocktake, the five-yearly census remains the key source of information about iwi. A question on iwi affiliation was introduced in the 1991 census, in accordance with the Runanga Iwi Act 1990, after a hiatus of almost a century. In addition to the census, some government departments (e.g. Ministry of Education) have

³ We note that several of these claims were for "large natural groups". A large natural group is usually an iwi or a cluster of hapū with a significant population and a large, distinctive claim area.

⁴ Waikato-Tainui completed its raupatu settlement in 1995 and recently signed a deed with the Crown regarding the Waikato River. Non-raupatu land issues and west coast harbour grievances have yet to be addressed.

⁵ The purpose of the tribal register, as defined by the 1995 Deed Creating the Waikato Raupatu Lands Trust, is to keep "a record of each person who is a member of Waikato iwi by descent from one of the hapuu referred to in the Fourth Schedule, who is a beneficiary of a Marae, who provides his or her date of birth and his or her parent line and whakapapa" (Tainui Māori Trust Board 1995:9).

⁶ The Māori Fisheries Act 2004 states that the settlement quantum is based in part on the notional iwi population as a percentage of the notional Māori population, as detailed in Schedule 3 of the Act. Iwi were required to create registers that contained a specified number of registrants in order to receive the allocated settlement quantum. Waikato was stated to have a notional population of 46,526 but only needed to have a registered population of 9,300 tribal members to meet the settlement requirements. In 2004 the Waikato-Tainui tribal register had well in excess of 9,300 members, and so the fisheries settlement is unlikely to have been a substantial motivator for tribal members to join the register.

introduced national or regional strategies to collect iwi data in an effort to be more responsive to the needs of iwi organisations and service providers.⁷

Efforts by government agencies to meet the statistical needs of iwi have been generally well received, but there are several potential shortcomings of relying solely on official data. One relates to the potential mismatch between how iwi affiliation is conceptualised in official statistics and the criteria employed by iwi themselves. As we discuss in more detail, the conceptual basis of iwi affiliation in official statistics is through self-identification, whereas most iwi registers define membership through a whakapapa (genealogical) link to constituent hapū (clans) and/or marae (family groupings). This conceptual disconnect is problematic in that it may yield populations of different sizes and characteristics. For iwi organisations, their primary and often statutory obligation is to their enrolled members, and so there is a compelling incentive for them to have data that reasonably reflect the characteristics, experiences and needs of their affiliates. The need for data that are representative of iwi register populations also extends to external agencies tasked with servicing them.

Although our analysis focuses exclusively on Waikato-Tainui, we hope to contribute to a better understanding of iwi classification and enumeration in general. With some notable exceptions (Gould 1996, 2005, Lowe 1989) this is an area that has been largely neglected, in part because research and policy tend to be concerned with the size and characteristics of Māori as an ethnic group (Kukutai 2004). As iwi, along with Māori incorporations and urban Māori authorities, have become better placed to engage the economic, social and cultural development of their communities (Hui Taumata 2005), there is a growing need for a closer examination of iwi data.

We start by briefly examining the ways in which iwi data have been collected in the census. We then focus on Waikato-Tainui, and how the conceptualisation and measurement of Waikato-Tainui in the census aligns with the Waikato-Tainui register population. Our analysis uses data from two time points, 1996 and 2006, to approximate the pre- and post-settlement period. We conclude with a discussion of implications and suggest some potential strategies for better aligning official data with iwi needs.

BACKGROUND

The keen interest that many iwi have in official data is, in some ways, a departure from a history of “tallying tribes” that was coloured by Māori resistance or non-participation, and largely geared towards the interests of the state (Kukutai forthcoming). To fully appreciate the shift that has occurred in recent decades, a brief review of tribal enumeration is instructive.

The collection of data on iwi pre-dates official statistics. In the decades following the Treaty, missionaries conducted various “censuses” of Māori, often along iwi lines, for their own administrative and proselytising purposes. Such data frequently included the number baptised, as well as distinguishing men, women and children (Kukutai et al. 2002). Missionaries encountered many obstacles in their attempts to enumerate Māori, and so their efforts are best seen as “guesstimates” rather than a census in the modern sense. The 1858 census was the first official effort to conduct a systematic count of Māori, but another 16

⁷ Seventy-eight iwi organisations were listed on the Tuhono consent form sent to people of Māori descent during the 2006 Māori electoral option. Tuhono, the Māori Affiliation Service, was legislated in 1997 with the explicit goal of putting individuals of Māori descent in touch with their mandated iwi organisation.

years passed before a second Māori census was taken. From 1874 data were collected on “principal tribes”, with published data often disaggregated by “sub-tribes” (hapū) and “locality” (kāinga). The allocation of individuals to a single principal tribe was intended to simplify enumeration by linking people to a specific place, but overlooked the affiliations that most Māori had to a number of hapū and iwi.

Regional and temporal variation in the accuracy and completeness of iwi data arose from factors that included resistance by communities, the competence and familiarity of the sub-enumerators with their regions and communities, and physical accessibility (Kukutai et al. 2002, Lowe 1989). Opposition to census-taking was especially marked in areas where there was broad support for the Māori King Movement (e.g. Waikato and the King Country, see Lowe 1989), and where details of livestock and cultivations were sought. Until the turn of the century the Crown had a strong interest in monitoring iwi, particularly those that openly challenged its authority. The impetus to monitor iwi and hapū declined, however, as their structures were severely weakened through depopulation and land alienation – either through raupatu (like Waikato) or the workings of the Native (later Māori) Land Court. The collection of iwi data ceased after the 1901 census, though Māori continued to be separately enumerated from the rest of the population up until 1951, after which time officials considered that “special measures” were no longer required (Census and Statistics Department 1952).⁸

The rapid post-World War II urbanisation of Māori had major demographic impacts on Māori as a population (Pool 1991), and on iwi and hapū (Barcham 1998). From 1945 substantial numbers of Māori migrated from their rohe (traditional tribal territory) into cities and towns, seeking employment in the post-war boom, assisted by government policies of relocation. Urbanisation had complex consequences, both positive and negative, but for iwi institutions the impacts were mostly of the latter sort. The establishment of tribal trust boards in the 1940s and 1950s provided a potential forum for the strengthening of tribal cohesion and identity, but many were challenged by the migration of members to other places, inadequate resources, and the constraints of meeting statutory responsibilities to the Crown. For a significant number of Māori, knowledge of their whakapapa and the importance accorded to those ties were either lost or severely attenuated. At the peak of urbanisation, Metge’s study of urban Māori found that the traditional tribal unit was “largely an abstract concept” that carried few advantages or obligations (1964:58).

However, since the 1980s, and particularly in the last decade, tribes have re-emerged as key institutions in Māori society and, to a certain extent, in national politics. The genesis of this shift can be seen in pan-Māori political activism that began from the late 1960s. A renaissance of Māori culture and language marked the beginning of a renewed sense of activism and self-empowerment among Māori, which included demands for compensation for breaches of the Treaty of Waitangi. As the settlement process unfolded, the Government sought to transfer limited responsibilities and service delivery functions to iwi structures through legislation, notably the Runanga Iwi Act 1990. While the Act was repealed soon after its passage, the legacy of strong centralised corporate iwi structures remained (Barcham 1998).

The return to the practice of collecting data on iwi thus coincided with demands by iwi for increased political and social representation, and efforts by the state to legitimate iwi organisations as key mechanisms through which to realise Māori aspirations (for critiques,

⁸ From 1945, iwi data were collected sporadically in relation to the Māori Electoral Roll (see Lowe 1989).

see Barcham 1998, Rata 1999). Given the impacts of urbanisation and the emergence of corporate tribal structures, responses to the census iwi question over the last 15 years are worth considering. Data for responses to the census questions on iwi and Māori descent for 1991 through to 2006 are shown in Table 1 below. We can see that both the number and proportion recording an iwi affiliation has increased consistently over the years. In 1991 368,655 people reported at least one iwi, representing 72% of the Māori descent population. By 2006 the number had increased to 535,233 representing 83%. Unlike the historical censuses that categorised people according to their principal tribe of residence, modern censuses have allowed for the reporting of up to five iwi. People who record more than one iwi are counted in each group; thus the sum of the various iwi groupings exceeds the sum of people recording an iwi affiliation.

Table 1 Reporting of At Least One Iwi and Māori Descent in the Census, 1991 to 2006

Indicator	1991	1996	2001	2006
Number reporting at least one iwi	368,655	426,234	473,460	535,233
Number reporting Māori descent	511,278	579,714	604,110	643,980
Per cent reporting at least one iwi	72.1	73.5	78.4	83.1

With the resurgence of tribal authority and the capital gained through settlements, a growing number of iwi organisations need reliable data on their constituents (for a critique of the use of official statistics in indigenous politics, see Rowse 2009). Such data are necessary for iwi to effectively carry out tribal governance functions and responsibilities, including developing internal policies, liaising with external service providers, and monitoring outcomes in important areas such as health and education. In addition to information on mainstream indicators, iwi also seek information that cannot be derived from conventional data sources (e.g. on tribal connectedness). To date, iwi have relied heavily on census data for information on themselves, much of which is collated in individual iwi demographic profiles compiled by Statistics New Zealand.⁹ The need for high-quality iwi data is not limited only to iwi that have settled claims with the Government. For those that are engaged in preparing a claim, census data provide a vital part of their empirical evidence base. For example, historical and contemporary census data have been heavily used to demonstrate the demographic impacts of land alienation on iwi populations (Kukutai et al. 2002).

WAIKATO-TAINUI

In 1995 Waikato-Tainui reached a historic settlement with the Crown over the confiscation of more than 1.2 million acres of tribal lands taken under the New Zealand Settlements Act 1863.¹⁰ The Waikato-Tainui rohe includes much of the Waikato region, and spans from the Rohe Pōtae (King Country) in the south through to South Auckland, and from the west coast to the mountain ranges of Hapuakohe and Kaimai in the east. The terms of the 1995 Deed only relate to members of the 33 hapū affected by the raupatu, which are listed in the fourth

⁹ *Ownership of the profiles rests with the individual iwi rather than Statistics New Zealand (Statistics New Zealand 2005).*

¹⁰ Waikato grievances relating to raupatu were first heard by the 1926 “Sim Commission”. This Royal Commission found the confiscation of Waikato lands had been excessive and awarded an annual annuity of 3,000 British pounds. Dissatisfied with the result, Waikato-Tainui entered further negotiations, and the annual payment increased to 5,000 pounds in 1946, to be managed by the newly established Tainui Māori Trust Board. Dialogue between Waikato and the Crown resumed in 1989 and developed into full negotiations in the early 1990s, resulting in the 1995 Deed of Settlement (Ministry for Culture and Heritage 2007).

schedule. Most of those hapū are defined as Waikato by whakapapa, but some are more closely connected with other iwi in the Tainui confederation, namely Ngāti Maniapoto, Ngāti Raukawa and Hauraki.

In 1998 a postal referendum of registered tribal members was conducted to decide upon an organisational form for managing the settlement. Under the new governance structure, tribal assets are held under the name of either the first Māori King, Potatau Te Wherowhero, or the landholding trustee. Strategic direction and governance are provided by Te Kauhanganui (the tribal parliament), comprising representatives from each of the signatory marae, along with Te Arataura (the tribal board). Tainui Group Holdings Ltd (TGH) manages the tribe's assets, and the Waikato Raupatu Trustee Company Ltd pursues social development objectives set by Te Kauhanganui and Te Arataura. After a difficult start, Waikato-Tainui has reasserted itself as a significant economic force in the Waikato region, with total net assets of \$488 million as at March 2008 (Waikato Raupatu Lands Trust 2008). In 2008, a tribal strategic plan, *Whakatupuranga Waikato-Tainui 2050*, was developed by Te Arataura and endorsed by Te Kauhanganui. It identifies four primary goals:

- to support the Kīngitanga (Māori King movement)
- to uphold tribal identity and integrity
- to achieve success, particularly in education and training
- to be socio-economically independent (Te Arataura 2008:4).

The Tribal Development Unit, established in 2006, has been tasked with developing programmes and policies that are consistent with the foregoing goals. In order to do so, there is a need for access to data that are accurate, relevant and robust.

CONSTITUTING IWI AND THEIR MEMBERS IN STATISTICS

We begin our comparison by examining the conceptual basis for determining iwi membership in the census versus iwi registers. The conceptual underpinning of iwi used in the census is set out in the Statistical Standard for Iwi 2005 (an updated version of the original 2000 classification, Statistics New Zealand 2005). The standard employs the widely used kinship hierarchy of waka, iwi, hapū and whānau. The standard notes that the inclusion of a particular social grouping as an iwi category is determined by taking various historical, cultural and legal factors into consideration.

On the New Zealand census, the iwi question immediately follows the question on Māori descent and is designed to elicit information about knowledge of iwi affiliation, rather than formal affiliation through registration status. In 2006 it asked, “Do you know the name(s) of your iwi (tribe or tribes)?” Respondents who checked the “Yes” box were instructed to “Mark your answer and print the name and home area, rohe or region of your iwi below”¹¹ and were able to report up to five iwi. There were no pre-specified tick-boxes on the form, but a list of iwi was printed on the reverse. Affiliation with an iwi is based entirely on self-identification – it does not require knowledge of a whakapapa connection to a constituent hapū, marae or whānau, nor knowledge of rohe. Registration status is, for the purpose of the census, considered irrelevant.

¹¹ A sample form from the 2006 New Zealand Census of Populations and Dwellings can be found online at: <http://www.stats.govt.nz/>.

How does the concept of iwi affiliation in the census compare with that employed by iwi themselves? Although each iwi has a unique process for registration on their tribal register, most require that registrants demonstrate their membership on the basis of whakapapa.¹² In the case of Waikato-Tainui, individuals apply to join the register by completing an application form or, for children, are registered by a whānau member. The application form has space for three generations of whakapapa (up to great-grandparents) for both the maternal and paternal lines. In practice, two generations of whakapapa for the Waikato-Tainui parent is considered sufficient. Where both parents have a whakapapa link to one of the 33 hapū, details are only required for one, but applicants may opt to provide both. Applicants are also required to state their principal hapū and marae (whānau grouping). The application must be endorsed by a kaumātua (tribal elder) from the named marae, or a Te Arataura member before it is considered valid. Though whakapapa has historically been interwoven with various sorts of obligations and responsibilities to kin and communities, applicants are not required to demonstrate an ongoing connection to, nor involvement with, their marae, hapū or whānau. Because the meaning of whakapapa is not explicitly defined in the 1995 Deed, there is flexibility in how the boundaries are defined and enforced.

When comparing iwi registers with the census, there are not only differences in how membership is determined, but also in how iwi are constituted. The Waikato census count is derived using the aforementioned statistical standard (Statistics New Zealand 2005). Level 1 aggregates iwi responses to 11 iwi regions (e.g. Waikato / Rohe Pōtae region) and several residual categories (e.g. not stated); level 2 comprises 129 individual iwi categories as well as residual responses. In the case of the Waikato rohe, there are five broader iwi categories: Waikato iwi plus four others. The level 1 and 2 Waikato codings are shown in Table 2.

Table 2 Categories Coded as Waikato / Te Rohe Pōtae, 2006 Census, Total Responses

Code	Waikato / Te Rohe Pōtae categories
03	Waikato / Te Rohe Pōtae (Waikato / King Country) Region
0300	Waikato / Te Rohe Pōtae (Waikato / King Country) Region, not further defined
0301	Ngāti Haua (Waikato)
0302	Ngāti Maniapoto
0303	Ngāti Raukawa (Waikato)
0304	Waikato

Although a list of iwi is included with the census form, respondents are free to provide any response they see fit. Consequently, Waikato iwi comprises the Waikato appellation in addition to 370 hapū and place names. Some of these responses, such as “Waikato Tainui”, clearly indicate that the respondent self-identifies as descending from Waikato iwi. However, numerous responses that are coded as Waikato iwi do not definitively demonstrate an intention to affiliate in that way. For example, names of places that are within the Waikato-Tainui rohe (e.g. Kāwhia) are coded as Waikato iwi, though residence within the Waikato-Tainui rohe does not necessarily indicate descent from Waikato iwi. A complete analysis of the coding of the iwi affiliation question is beyond the scope of this paper, but our preliminary analysis indicates that coding of New Zealand census iwi data is due for a substantial review.

¹² Most, if not all, iwi employ the concept of whakapapa to define their populations, specified to between two and four generations. The Ngāi Tahu register differs in that applicants are required to demonstrate a whakapapa link to one of the Ngāi Tahu ancestors listed on a census undertaken in 1848 (known as the “Blue Book”). Unlike many of the registers for Native American tribes or indigenous Hawaiians, iwi do not employ blood quantum criteria to determine membership. Historically, statistical and some legislative definitions of Māori referred to “half or more Māori blood”, but these have since been replaced with the concepts of self-identified Māori ethnicity (i.e. cultural affiliation) or Māori ancestry.

In contrast to the census, the Waikato-Tainui register population is defined in terms of the aforementioned 33 hapū stated in the Deed which, in turn, cover 66 beneficiary marae (WRLT 2008). We compared the list of raupatu hapū with the coding list used by Statistics New Zealand to designate individuals to Waikato iwi and found several differences. The main difference is that seven hapū covered by the Deed are not designated as Waikato iwi, but are instead assigned to Ngāti Raukawa (Waikato), Ngāti Maniapoto, Ngāti Haua and Waikato / Te Rohe Pōtae undefined.¹³ Furthermore, of the marae associated with the Deed hapū, only two (Turangawaewae and Makaurau) appear in the list of Waikato responses. Official data that ostensibly refer to Waikato iwi may encompass different people from those enrolled on the Waikato-Tainui register, with the potential to lead to substantial differences in the parameters and composition of the population measured.

Finally, differences are likely to arise from the inherently different nature of the census and the Waikato-Tainui register. The latter is a rolling database of members dating back to the early 1980s, while the census is a “snapshot” of those usually resident in New Zealand. Because register members tend to be for life (i.e. once registered, few people de-register), the register has an in-built mechanism for stability across generations, as children are added to the register and deceased members are removed. In contrast, the propensity to identify as Waikato in the census may wax and wane (see, for example, Lowe 1989).

Although there may be troubling conceptual differences between the way in which “iwi” is defined and measured on the census, there is no doubt that the resources and expertise available to Statistics New Zealand enable it to have superior processes and systems in place to reduce errors in terms of data collection, processing and outputs.¹⁴ For the register, the main source of error that may account for any disconnect is related to duplicate records, invalid applications, and the retention of deceased members. A recent quality check of the register undertaken before we extracted the sample detected 3,682 such records, representing about 6% of the total. It is also likely, given the problems with outdated address data (see footnote 17), that our sample included members who had moved abroad. Finally, proxy registering may mean that the register includes people who may have been added by a whānau member (e.g. a grandparent) but may not necessarily self-identify as Waikato-Tainui or record a Waikato affiliation in the census. However, it is unlikely to be a major factor given that proxy identification also occurs in the census, particularly for children (i.e. whose responses are recorded by their parents).

COMPARING DATA FROM THE CENSUS AND WAIKATO-TAINUI REGISTER

Notwithstanding the different definitions and processes employed, the question remains: How closely aligned is the official Waikato iwi population with that defined by the iwi’s own register? To answer this question we extracted data from the register for individuals who were registered at the time of each census and who had a “current” New Zealand postal

¹³ The hapū were: Ngāti Apakura (defined in the standard as Waikato / Te Rohe Pōtae not further defined), Ngāti Haua and Ngāti Wairere (Ngāti Haua Waikato); Ngāti Ngutu and Ngāti Paretokawa (Ngāti Maniapoto); and Ngāti Korokii and Ngāti Raukawa ki Panehākua (Ngāti Raukawa Waikato).

¹⁴ *In passing we note that the date of birth is missing for 4.2% of the register population (as at 2006), about the same as the proportion of the population for which age had to be imputed in the 2006 census (see age variable, available at: <http://www.stats.govt.nz/census/2006-census-information-about-data/information-by-variable/age.htm>).*

address.¹⁵ For the census population we provide two sets of figures: one for the Waikato iwi alone and one for Waikato plus Ngāti Haua.¹⁶ The latter covers two of the seven hapū omitted from the official Waikato iwi designation.

Table 3 Comparison of Waikato-Tainui Register Population with Waikato Iwi Populations, Including and Excluding Ngāti Haua in the 1996 Census, Key Indicators¹

Indicator	Waikato-Tainui, tribal register ²		Waikato Iwi, 1996 census ³		Waikato iwi and Ngāti Haua (Waikato), 1996 census ⁴	
	N (%)		N (%)		N (%)	
Population size	22,685		23,808		26,136	
Per cent male	11,209	(49.4)	11,262	(47.3)	12,390	(47.4)
Age group						
0–14	7,153	(31.6)	9,204	(38.7)	10,149	(38.8)
15–29	7,334	(32.4)	6,402	(26.9)	6,993	(26.8)
30–44	5,192	(22.9)	4,611	(19.4)	5,049	(19.3)
45–64	2,450	(10.8)	2,913	(12.2)	3,204	(12.3)
65+	509	(2.2)	675	(2.8)	729	(2.8)
Median age	25.5		20.6		19.9	
Regional Council ⁵						
Waikato	10,707	(47.2)	8,850	(37.2)	10,062	(38.5)
Auckland	6,542	(28.9)	8,022	(33.7)	8,445	(32.3)
Bay of Plenty	1,435	(6.3)	1,395	(5.9)	1,497	(5.7)
Wellington	845	(3.7)	1,203	(5.1)	1,350	(5.2)
Other RCs	3,123	(13.9)	4,338	(18.1)	4,782	(18.3)
Per cent in North Island	21,415 (94.4)		22,164 (93.1)		24,279 (92.9)	
Per cent in territorial authorities with at least 50,000 people	11,097 (48.9)		(Unavailable)		(Unavailable)	
Total dependency ratio ⁶	0.51		0.71		0.71	
Youth ratio ⁷	0.48		0.66		0.67	
Masculinity ratio ⁸	0.98		0.90		0.90	

Notes:

¹ Per cent of population with stated response for each indicator.

² Members registered by 5 March 1996 and who currently have a New Zealand address.

³ Usually resident population reporting “Waikato” iwi, either alone or as one of several iwi.

⁴ Includes all Ngāti Haua (n = 2,328), including those who may have also reported Ngāti Haua in conjunction with a Waikato response.

⁵ Geographic location of individuals on the register was determined according to their address at the time the data was extracted in December 2008.

⁶ (0–14 yrs + 65+ yrs)/15–64 yrs.

⁷ 0–14 yrs/15–64 yrs.

⁸ Males/females.

¹⁵ Like most administrative registers, the Waikato-Tainui register does not have a reliable mechanism for updating the contact details of its members, and only the most recent address is stored. Consequently the geographic location of members at the time of the census is approximated by using their postal address stored in the database in December 2008, when the samples were extracted. This means we may have included people who lived in New Zealand when they joined the register, but who resided overseas at the time of the census.

¹⁶ To statistically assess whether Ngāti Haua should be included with the Waikato census population, we compared the proportions in the register and census, using the definition of Waikato employed in the iwi standard classification. This yielded a 2006 register population with a “current” New Zealand address of 31,043. Members who reported Ngāti Haua as their principal hapū comprised about 16% of the Waikato plus Ngāti Haua population. In the 2006 census, 4,923 people recorded a Ngāti Haua response, but of those, 537 (11%) also recorded as Waikato. Excluding the latter, Ngāti Haua comprised nearly 12% of the Waikato plus Ngāti Haua population in the census (4,386/(4,386+33,429)*100). We also made similar comparisons for Ngāti Raukawa (Waikato) and Ngāti Maniapoto. We found that the Maniapoto share on the register was far below that in the census (4% versus 48%), which is to be expected given that only a small portion of Maniapoto were covered by the Deed. For Raukawa, the proportions were 14% and 18% for the register and census respectively. For purposes of clarity we did not include the latter in our tables.

Table 4 Comparison of Waikato-Tainui Register Population with Waikato Iwi Populations, Including and Excluding Ngāti Haua in the 2006 census, Key Indicators¹

Indicator	Waikato-Tainui, tribal register ²		Waikato iwi, 2006 census ³		Waikato iwi and Ngāti Haua (Waikato), 2006 census	
	N (%)		N (%)		N (%)	
Population size	46,542		33,429		38,352 (37,815) ⁴	
Per cent male	22,702	(48.8)	15,504	(46.4)	17,811	(46.4)
Age group						
0–14	7,206	(16.2)	12,504	(37.4)	14,364	(37.5)
15–29	15,061	(33.8)	8,319	(24.9)	9,516	(24.8)
30–44	12,043	(27.0)		⁵		
45–64	8,038	(18.0)	11,424	(34.2)	13,149	(34.3)
65+	2,247	(5.0)	1,182	(3.5)	1,323	(3.4)
Median age	32		21		–	
Regional Council ⁶						
Waikato	14,120	(46.7)	11,499	(34.4)	13,722	(35.8)
Auckland	8,511	(28.1)	11,469	(34.3)	12,435	(32.4)
Bay of Plenty	2,268	(7.5)	2,379	(7.1)	2,757	(7.2)
Wellington	1,337	(4.4)	1,713	(5.1)	2,106	(5.5)
Other RCs	4,024	(13.3)	6,369	(19.1)	7,332	(19.1)
Per cent in North Island ⁶	28,875 (95.6)		30,885 (92.0)		35,415 (92.3)	
Per cent in territorial authorities with at least 50,000 people ⁶	16,929 (59.9)		20,730 (62.0)		23,304 (60.8)	
Total dependency ratio ⁷	0.27		0.69		0.69	
Youth ratio ⁸	0.21		0.63		0.63	
Masculinity ratio ⁹	0.96		0.87		0.87	

Notes:

¹ Per cent of population with stated response for each indicator.² Data were extracted for the population residing in New Zealand as at 7 March 2006.³ Usually resident population recording a Waikato iwi response, either alone or as one of several iwi.⁴ The figure in brackets excludes people who recorded a Ngāti Haua response in combination with a Waikato response.⁵ Data only available for combined 30–64 age groups.⁶ Geographic location of individuals on the register was determined according to their address at the time the data were extracted in December 2008. Geographic location of tribal members excludes individuals whose records were marked “mail returned” (i.e. a tribal mail-out to that member had been returned to the register administrator at some stage).⁷ (0–14 yrs + 65+ yrs)/15–64 yrs⁸ 0–14 yrs/15–64 yrs⁹ Males/females.

Focusing first on size, Table 3 shows that the register population in 1996 was only slightly smaller than the Waikato iwi population enumerated in the census (22,685 and 23,808 respectively), and about 90% of the size of the combined Waikato/Ngāti Haua grouping. In terms of composition, however, the Waikato register population was significantly older, far more heavily concentrated in the Waikato Regional Council area,¹⁷ and more evenly balanced in terms of its sex ratio. In 2006 the differences between the census and register populations were even more striking. First, the latter more than doubled in a decade to reach 46,542,

¹⁷ Spatial comparisons ought to be treated with some caution. At the time of writing, approximately two-fifths of registered tribal members were marked as “Mail Returned”, indicating that mail had been sent to their current postal address but had been returned to sender. The use of postal address as a proxy for place of residence may skew the distribution toward the Waikato region if, for example, highly mobile members give a permanent homestead address, and these homesteads are more likely to be located in the Waikato.

making it about 30% larger than the Waikato census population ($n = 33,429$) and 18% larger than the combined Waikato / Ngāti Haua grouping ($n = 38,352$). This is remarkable, given that the Waikato census population increased by almost two-fifths over the same period.¹⁸ To put these growth trajectories in perspective, the Māori descent population (those reporting Māori ancestry in the census) and the Māori ethnic group (those reporting Māori ethnicity, either alone or in combination) increased just 11% and 8% respectively over the same period.

The geographic distributions of both the register and census populations closely resemble those in the 1996 census, with a vast majority of registered members concentrated in the Waikato and Auckland areas, and slightly more likely to be living in territorial authorities with at least 50,000 people. For both populations, the masculinity ratio decreased over the decade and was significantly lower than that for the total New Zealand population (0.99). The age structural differences between the Waikato register and census populations were even more apparent in 2006, with only 16% of the register population aged 0–14 years, compared to one-third of the Waikato Census population. The older age structure of the Waikato register population departs from all the empirical evidence on Māori populations and sub-groups showing Māori to have a much younger age structure than New Zealand Europeans and the national New Zealand population. The older age structure of the register population is likely to be due, in part, to the historical nature of the register – as a voting roll – and the age-specific incentive structure of benefits associated with the settlement (e.g. tertiary educational scholarships, kaumātua grants, sports grants). The under-representation of young people is apparent in the extremely low youth ratio (ratio of children to the working-age population), which indicates the proportion of children that require support relative to those at working ages (the total dependency ratio extends this concept to include the retired). For various reasons too complex to elaborate here, a low dependency ratio is considered desirable, especially in terms of economic productivity and development. However, in the case of the register population, the low ratios are largely the product of under-registration at the younger ages.

Using data for 10-year age groups, Table 5 shows that the massive increase in Waikato-Tainui membership over the decade was unevenly distributed across age groups. In 2006 the number of members aged 0–9 years actually decreased, though this may be due in part to the pattern of missing date-of-birth data for those who joined after 1996. In contrast, the cohort aged 0–9 years in 1996 that was aged 10–19 years in 2006 more than doubled, from 4,601 to 10,236. This points to the potential effects of incentives such as tertiary education scholarships.

¹⁸ Note that the 1996–2006 growth was not monotonic, but saw a huge spike in the period immediately following the deed (50.3% increase 1996–2001), and then a slight decrease 2001–2006 (6.6%). The decline is unlikely to have been driven by out-migration (to Australia, for example) or natural decrease (excess of births over deaths), but was more likely due to shifting identification patterns. Of the 10 largest iwi, Waikato-Tainui also had the highest inter-censal growth rate for 1996–2001, so it may not be surprising that there was a decline in the subsequent census.

Table 5 Cohort Gain between March 1996 and March 2006, Waikato-Tainui Register Population

Age group	1996	2006	% gain*
	(N)	(N)	
0–9	4,601	2,456	–
10–19	5,058	10,236	122.5
20–29	4,828	9,575	89.3
30–39	3,837	8,421	74.4
40–49	2,282	6,713	75.0
50–59	1,171	3,843	68.4
60–69	621	1,988	70.0
70+	240	1,363	–

* $(pop. x+10, t+10 - pop. x, t) / pop. x, t * 100$ where $x = age, t = year$.

To summarise, Tables 3 to 5 show clear differences between the Waikato register and census populations. There are several factors that may account for the divergence, beyond the conceptual and procedural differences already noted. In terms of the size difference, one could point to the exclusion of five of the Deed hapū from the Waikato / Ngāti Haua grouping or, equivalently, the inclusion of “non-Waikato” hapū in the register population. If we simply define the register population using the standard classification definition of Waikato iwi we get 31,043, which is much closer to the census count. However, the definition is obviously not consistent with the terms of the Deed, and the population composition will still vary because a good number of people will self-identify as Waikato in the census but not be registered, and vice versa.

For reasons already noted, there are far greater incentives for people who are adults or approaching adulthood (i.e. pre-tertiary ages) to join the Waikato-Tainui register than there are to self-identify as Waikato on a census form. Social-psychological factors may also play a role in encouraging people to join the register. Since the settlement, the public profile of Waikato-Tainui has grown exponentially through media coverage, development initiatives, branding (e.g. Radio Tainui, Novotel Tainui) and a diverse range of activities explicitly devised to foster Waikato-Tainui identity and cohesion. These include flagship events like the year-long 150th Kīngitanga celebrations, to waka ama and kapa haka competitions, rangatahi (youth) summits and the Tainui sports awards. In many ways the settlement has created new public frames for Waikato identity and a potentially important catalyst for people who have always had a whakapapa connection, but who either did not know about it, did not care, or for whatever reason felt unable to legitimately claim it. We also note that, compared to tribal registers in other countries (e.g. the United States and Canada), the criteria and processes used to delimit tribal membership in New Zealand are relatively inclusive. Iwi are more interested in expanding rather than limiting their membership base, which may be due, in part, to the fact that most members do not systematically and directly benefit financially from settlement proceeds (e.g. through annual dividends).

DISCUSSION

In a post-settlement environment, iwi are increasingly turning their attention to investing in measures to improve the short- and longer-term wellbeing of their constituencies. To successfully accomplish these goals, Waikato-Tainui and other iwi require accurate and robust data on their registered tribal members to make informed policy decisions. However, as we have shown, disparities between the conceptualisation and operationalisation of iwi have the potential to generate substantial differences in the parameters and composition of the populations measured, which potentially limits the utility of census data for iwi organisations.

Given our findings, we suggest that the collection of iwi data in the census may be better aligned with the needs of iwi organisations by modifying the iwi question in the census. This could be achieved by expanding the question to include registration status in addition to self-identification.¹⁹ We acknowledge that there will always be some degree of mismatch, because some people erroneously believe they are registered while others are registered without their knowledge. However, prompting for registration status will at least conceptually bring the census question closer to the notion of iwi membership currently used by tribal registers. Moreover, there should also be flexibility for iwi authorities to have access to data that are aggregated according to their register boundaries, rather than those defined by the standard classification, which may be a poor fit.

Finally, although the census and other official administrative data collections have provided a welcome source of information about and for iwi, agencies tend to collect data that more often reflect their interests and needs rather than those specific to iwi organisations. There are various topics that iwi are interested in (e.g. tribal identity and connectedness) that government agencies either have little interest in or lack a suitable mandate to collect data on. In the case of Waikato-Tainui, the foregoing issues have motivated efforts to undertake a Waikato-Tainui social survey, conducted internally with assistance from external experts. It is hoped that the survey will fill some knowledge gaps on Waikato-Tainui that are not currently being met by existing data sources and will elicit information that is more closely linked to tribally determined development goals. In the longer term, however, iwi lack the resources to conduct ongoing surveys and, realistically, will continue to depend greatly on official statistics for information about themselves. Thus, it is important that official data on iwi are regularly revisited to ensure the data collected are well aligned with those for whom they are intended.

REFERENCES

- Barcham, M. (1998) "The challenge of urban Māori: Reconciling conceptions of indigeneity and social change" *Asia Pacific Viewpoint*, 39(3):303–314.
- Census and Statistics Department (1952) *New Zealand Population Census 1951*, Census and Statistics Department, Wellington.
- Gould, J. (1996) "Socio-economic differences between Māori iwi" *Journal of the Polynesian Society*, 105(2):165–183.
- Gould, J. (2005) "Socio-economic gaps between Māori and Māori: Outcomes of sixteen iwi 1991–2001" *Journal of the Polynesian Society*, 114(1): 29–43.
- Hui Taumata (2005) *Summary Report*, Hui Taumata, Wellington.
- Kukutai, T.H. (2004) "The problem of defining an ethnic group for public policy: Who is Māori and why does it matter?" *Social Policy Journal of New Zealand*, 23:86–108.
- Kukutai, T.H. (forthcoming) "Building ethnic boundaries in New Zealand: Representations of Māori identity in the census" in P. Sköl and P. Axelsson (eds.) *Indigenous Peoples and Demography: The Complex Relation between Identity and Statistics*, Berghan Books, New York and Oxford.
- Kukutai, T., I. Pool and J. Sceats (2002) *Central North Island Iwi: Population Patterns and Trends*, a report prepared for the Crown Forestry Rental Trust by Portal Consulting and Associates, Crown Forestry Rental Trust, Wellington.

¹⁹ In the U.S. census, tribal information is elicited partly on the basis of registration status. In the 2000 census, the "American Indian and Alaska Native" tick-box for the race question was immediately followed by the prompt "Print name of principal or enrolled tribe."

- Lowe, J. (1989) *Iwi in Demographic Change 1874–1951: Te Puawaitanga o nga Iwi 1874–1951*, Department of Māori Affairs, Wellington.
- McHugh, P. (1991) “The Māori Magna Carta: New Zealand law and the Treaty of Waitangi” *New Zealand Journal of History*, 31(1):38–57.
- Metge, J. (1964) *A New Māori Migration: Rural and Urban Relations in Northern New Zealand*, Berg Publishers, Oxford, UK.
- Ministry for Culture and Heritage (2007) *The Waikato-Tainui claim: The Treaty in Practice*, www.nzhistory.net.nz/politics/treaty/the-treaty-in-practice/waikato-tainui [accessed 15/3/09].
- New Zealand History Online (2008) *The Treaty in Brief*, www.nzhistory.net.nz/politics/treaty/the-treaty-in-brief [accessed 6/1/09].
- Office of Treaty Settlements (2008) *Claims Progress*, www.ots.govt.nz/ [accessed 17/12/08].
- Pool, I. (1991) *Te Iwi Māori: A New Zealand Population Past, Present & Projected*, Auckland University Press, Auckland.
- Rata, E. (1999) *A Political Economy of Neotribal Capitalism*, Lexington Books, Lanham, MD.
- Rowse, T. (2009) “Official statistics and the contemporary politics of indigeneity” *Australian Journal of Political Science*, 44(2):193-211
- Statistics New Zealand (2005) *Iwi: New Zealand Standard Classification – 2005 Updated Version*, Statistics New Zealand, Wellington.
- Statistics New Zealand (2009) *Information about 2006 Census Data*, www.stats.govt.nz/census/2006-census-information-about-data/information-by-variable/age.htm [accessed 20/1/09].
- Tainui Māori Trust Board (1995) *Deed Creating the Waikato Raupatu Lands Trust*, Rudd, Watts & Stone, Auckland.
- Te Arataura (2008) *Whakatupuranga Waikato-Tainui 2050*, Te Kauhanganui o Waikato Inc, Ngāruawāhia.
- Waikato Raupatu Lands Trust (2008) *Waikato Raupatu Lands Trust: Annual Report 2008*, Waikato Raupatu Lands Trust, Hamilton.
- Waitangi Tribunal (2009) *Waitangi Tribunal Te Rōpu Whakamana i te Tiriti o Waitangi*, www.waitangi-tribunal.govt.nz/ [accessed 6/1/09].

**A “MAIN” ETHNIC GROUP?
ETHNIC SELF-PRIORITISATION AMONG NEW ZEALAND YOUTH**

Tahu Kukutai¹
Stanford University

Paul Callister
Associate Professor
Institute of Policy Studies
Victoria University of Wellington

Abstract

Since 1991 a growing share of the New Zealand population has reported more than one ethnic group in the census, with rates especially high among children. A key challenge arising from the collection of ethnicity data is deciding where to count people who record more than one group. In this paper we explore how a self-prioritised measure of main ethnicity may facilitate and improve the usage of multiple-ethnic data. We do so using 2006 data from wave one of the Youth Connectedness survey of early adolescents. We find that three-quarters of youth who recorded more than one ethnic group were able to choose a main group when asked to do so. Though we have reservations about using a main ethnicity measure to output ethnic data, we see promise for research that seeks to better understand identification processes and their relations with ethnic identity and inequality.

INTRODUCTION

The view that race and ethnicity are socially and politically constructed markers of difference rather than objective traits of human beings is unremarkable in the social sciences (Omi and Winant 1994). In other forums, however, the belief in the idea of distinct races endures – testament to its powerful rendering through legal, bureaucratic and “scientific” designations, racial ideologies, and everyday interactions (Callister and Didham 2009). Although the globalisation of migration flows and the removal of prescriptive identity rules and classifications have begun to challenge long-held notions that individuals belong to a single race or ethnic group, change has been slow to filter through to official statistics.

Among census-taking nations, New Zealand is one of a small number that explicitly allows for identification with multiple ethnic groups (Kukutai and Thompson 2007, Morning 2008). Since the introduction of the ethnic group question in the 1991 census, a growing share of the New Zealand population has reported belonging to more than one group. As Table 1 shows,

¹ **Acknowledgements**

We would like to acknowledge the support of the Youth Connectedness project leaders, Paul Jose and Jan Pryor, who kindly granted us access to the YC data, as well as the project’s Māori research advisor, Wally Penetito. The YC project is carried out by the Roy McKenzie Centre, Victoria University, and funded by the Foundation for Research, Science and Technology. We also wish to thank Deborah Potter of Statistics New Zealand for her support in instigating this research, as well as Robert Didham for providing us with the data shown in Table 1. We also appreciate Melinda Webber’s readiness to share with us the preliminary results from her Ethnicity and Achievement Survey. Finally, the comments provided by two anonymous reviewers on an earlier draft of this paper were also very helpful. Any omissions or errors of fact are ours alone.

Correspondence

All correspondence can be directed to Tahu Kukutai at tkukutai@tahatu.co.nz

in 1991 just 5% of New Zealanders identified with more than one ethnic group; by 2006 this had doubled, though the increase has not been monotonic. In all years multi-ethnic identification has been especially pronounced among younger people and among Māori and Pacific peoples. The latter groups are of interest to policy makers, in part because of their comparative socio-economic disadvantage.

Table 1 More Than One Ethnic Group Reported, Census of Population and Dwellings, 1991–2006

Census year	More than one ethnicity reported					
	N			% ¹		
	Total NZ, all ages	Total NZ, 0–14	Māori, all ages	Total NZ	Total NZ, 0–14	Māori, all ages
1991	166,158	77,172	111,357	5.0	19.3	25.6
1996	536,757	181,338	249,933	15.5 ²	45.2	47.8
2001	324,090	145,194	231,555	9.0	34.2	44.0
2006	400,428	164,262	266,934	10.4	38.1	47.2

1 Percentage of people with a valid ethnic group response.

2 In 1996 an “Other European” tick-box was included, along with a sub-list that specified English, Irish, Australian, Scottish and Dutch ethnic groups. This led to an increase in the reporting of those groups. The tick-box was dropped from subsequent census questionnaires.

In New Zealand, as in other Anglo settler states (United States, Canada, Australia), ethnicity and related terms such as “race” and “indigeneity” are important variables in social research and policy. Among those who work with ethnicity data in New Zealand there is a broad consensus that allowing people to choose more than one group is desirable to best reflect the nation’s ethnic milieu (Didham 2005). However, giving effect to complex ethnic identification presents a number of challenges in terms of measurement, analysis and dissemination. How should people who choose to identify with multiple groups be statistically represented? What weight should be given to statistical requirements versus individual identification decisions? What does identification with more than one group even mean? As Bhopal (2004) notes, there is no easy answer to such questions:

The increasing acceptance of sexual unions that cross ethnic and racial boundaries is adding both richness and complexity to most societies. The way to categorise people born of such unions is unclear and the current approaches are inadequate, partly because the number of potential categories is huge. (Bhopal 2004:444)

In this paper we explore how a self-prioritised ethnicity measure may help advance the understanding of complex ethnicity data. Allowing people to choose a main ethnic group was one of several approaches for managing multiple-ethnic data identified in the 2004 *Report of the Review of the Measurement of Ethnicity* (Statistics New Zealand 2004). However, with the exception of Kukutai (2004, 2008), little research has been conducted on ethnic self-prioritisation. We attempt to address this dearth by exploring whether a main ethnicity prompt delivers useful information that cannot be captured by the officially sanctioned methods.

We begin with a discussion about multiple-ethnic identification in surveys and some ways of reporting and analysing such data. We then provide an empirical analysis of self-prioritisation using data from the first wave of Victoria University’s longitudinal Youth Connectedness survey of early adolescents. Only summary data are presented as a full technical paper by

Kukutai (2008) is available on the Statistics New Zealand website. Given that young people will significantly influence the nation’s ethnic terrain in coming years, it is valuable to have insights into their identification decisions. Three questions inform the following analysis:

- Can young people who identify with multiple ethnic groups choose a main ethnic group when asked to do so?
- If so, what group is prioritised?
- How does a young person’s readiness to choose between his or her ethnicities vary across specific ethnic group combinations?

We conclude with some thoughts about the role that main ethnicity could play in the future in research and policy making.

MULTIPLE-ETHNIC IDENTIFICATION

Patterns of ethnic identification, including how people are designated in the census, are important for various reasons. In terms of policy and planning, ethnicity data are routinely used to identify population parameters and characteristics, often in ways that influence the distribution of valued resources. Patterns of ethnic identification are also of sociological import as they “reflect and affect the surrounding social world” (Liebler 2004:702). In New Zealand (Callister 2003, Keddell 2007, Kukutai 2007) and elsewhere (Brunsma 2005, Roth 2005, Tafoya et al. 2004, Xie and Goyette 1997) there is ample evidence that the ethnic labels people choose or are designated are not simply reflections of their parental ethnicities, but are mediated by a range of factors. These may be categorised as:

- *structural* – for example, the ethnic composition of the neighbourhood, ethnic group status differences, and ethnic politics
- *personal* – for example, life-cycle stage and the ties linking individuals and their families
- *contextual* – for example, how, where and why ethnic identification was elicited (Burton et al. 2008, see also Carter et al. 2009).

The matter of defining who is multi-ethnic is not straightforward. Goldstein and Morning’s (2000) research on the multiple-race population in the United States suggests at least three ways of conceptualising a multiple-ethnic population in New Zealand: by ancestry, by ethnic identification in the census, and by parental ethnicities. The disconnect between boundaries based on ancestry, parental ethnicities and self-identification varies, depending on the groups involved, the context and the time period. To illustrate this complexity, 643,977 people reported Māori ancestry in the 2006 census, but just over 80% of them (522,577) identified as Māori by ethnicity. By comparison, an estimated 7,876,568 people reported American Indian ancestry in the 2000 US census, but only 4,315,865 people (representing 55% of the American Indian descent population) racially identified as American Indian (Brittingham and de la Cruz 2004).²

The statistical construction of a multiple-ethnic population is only possible if people are permitted to identify as such (inputs), *and* their identification decisions are tabulated in a way that their number can be determined (outputs). Morning (2008) has noted three possible ways in which census forms allow for multi-ethnic identification: permitting the respondent to check off more than one category; offering a generic mixed-response option that, in effect,

² In fact the proportion is almost certainly lower because some people who reported American Indian race would not have reported American Indian ancestry.

creates a single ethnic category (e.g. “Mestizo”); and, specifying exact combinations of interest.

In New Zealand, all three approaches have been used to document complex ethnic and racial identities. From 1874 through to 1921 inter-racial mixing was captured by the use of the “half-caste” category.³ The vast majority of half-castes were half-caste Māori-Europeans, who were further distinguished on the basis of those who lived as Māori (i.e. in a kin-group village setting) and those who lived as Europeans. According to the 1921 census report the total number of half-caste Māori-Europeans was only about one-sixth of the number of Māori (49,635). Though the tables show half-caste Europeans (4,236) outnumbered half-caste Māori (3,116), the latter category was almost certainly underestimated. This is because many Māori with a European parent or grandparent chose not to acknowledge their mixed heritage, or were simply identified as Māori (Buck 1924).

The 1926 census introduced a new complexity by requiring respondents to quantify their heritage more precisely in terms of fractions.⁴ The examples accompanying the question varied over time, but among the specific combinations named were “European-Indian quarter-caste” (1926); “1/2 Māori – 1/2 Indian” (1945); and “7/8 European + 1/8 Māori” (1981). From the mid-1980s two significant changes occurred that affected the reportage of complex identities. First, the collection of fractional data was abandoned in the 1986 census and tick-boxes for ethnic origin groups were introduced with the instruction to “tick the box or boxes that apply to you”. Second, all references to origins were removed from the census questionnaire in 1991 and replaced by the term “ethnic group”. The concept of ethnic group is intended to capture a person’s current cultural affiliation rather than the ethnic origins of their ancestors.

“COUNTING” COMPLEX ETHNICITY

The acknowledgement of complex ethnicity in the New Zealand census has, in some ways, been less problematic than deciding how such people ought to be statistically represented. For many decades post-enumeration rules were used to allocate people who acknowledged their mixed descent to one race group. In the early period of census data collection it was standard practice to tabulate racial mixtures in census publications because officials had a keen interest in “miscegenation” and what it supposedly represented: the rate of Māori absorption into the European population (Kukutai forthcoming). However, when comparing Māori with the general – predominantly European – population, some rule of designation was needed. Until 1921 half-castes were allocated to the Māori or European population depending on their mode of living. After 1926 a “half or more” rule was used that allocated those with half or more Māori blood into the Māori population. This was a unilateral form of prioritisation as many half-castes could demonstrably have been counted with Europeans.⁵ Paradoxically, though half-caste denoted an “in-between” statistical category, the allocation of half-castes to either the Maori or European population served to solidify the notion of Māori and European

³ Quotation marks are used on first mention to indicate that the term is not a neutral descriptor, but are omitted in subsequent mentions, in keeping with the historical usage of the term.

⁴ Though the term “race” was replaced by the language of “descent” on the 1926 census questionnaire, both terms continued to be used interchangeably up until the 1976 census.

⁵ Māori with non-European heritage (e.g. Indian-Māori; Polynesian-Māori) were subject to a variety of allocation rules. From 1916 to 1951 they were allocated to the “race alien” population, regardless of the reported degree of Māori blood; from 1956 such people were subjected to the usual half or more rule, *except* when the non-European race was Polynesian. In the latter case, individuals with Māori and any degree of Polynesian descent were counted only in the Māori population from 1951 until the 1966 census.

as separate races (Kukutai forthcoming). The system of eliciting data on fractional identities, but allocating people who recorded “mixed” race or descent to a single group, continued in some form through to 1981.

Once fractions were dispensed with, new rules of allocation were needed. Between 1986 and 1991 Statistics New Zealand, as well as most government agencies and researchers, relied primarily on the prioritisation of ethnic groups in order to simplify the presentation of the data. Under this system, Māori had priority coding, followed by Pacific peoples, then Asian, other ethnic groups besides European, followed by “Other European” and, finally, New Zealand European (Allan 2001).⁶ Under prioritisation, a person reporting, for example, as both Māori and Samoan was classified only as Māori. When prioritisation of ethnic (origin) responses was first introduced in 1986, multiple-ethnic group reporting was under 5%. However, as the share of the population recording diverse ethnicities grew, so too did the distorting effect of prioritisation on statistics, particularly for Pacific peoples (Didham 2005). Despite its drawbacks, prioritisation-by-proxy is still used in some areas of education and health research (for a summary of education-related research see Leather 2009; for examples of health research see Chan et al. 2008, Sundborn et al. 2008).

When undertaking its review of ethnicity in 2004, a number of outputting options were put to Statistics New Zealand. One was to report main single and multiple combinations. Other suggested methods, most of which reduce responses to a single ethnicity, were:

- publish total counts
- randomly allocate multi-ethnic people to a single ethnic category
- use a fractional ethnicity model
- develop a system that can “predict” likely main ethnic group
- let people choose their own main ethnic group.

The strengths and weaknesses of some of these systems have been explored in this journal (Callister 2004).⁷ Although New Zealand is unique in having a long history of collecting multiple-race/ethnicity data, the contemporary challenges involved in dealing with such data are not uncommon. In the U.S., bureaucrats and researchers face similar issues with the introduction of multiple-race reporting in the 2000 census. One of the proposed solutions has been to predict probabilistically the main ethnicity of people who record more than one race, thereby yielding data that conforms to traditional mutually exclusive race categories (Liebler and Halpern-Manners 2008).

There are a number of possible reasons underlying the demand for single ethnic group data. Perhaps the weakest one is that some data users find ethnic complexity conceptually difficult to deal with and feel more comfortable when people are placed in seemingly clear-cut groups. Methodological concerns also have a role. People who affiliate with more than one group are not readily accommodated within standard statistical techniques that often require mutually exclusive categories. This problem is averted when data are collected using some form of “mixed” single category (e.g. “White and Black Caribbean” in the UK census). In the absence of such a category, data users often create mutually exclusive categories by using

⁶ Prioritising data has not been unique to New Zealand. For example, Mays et al. (2003) set out a variety of ways that US agencies have prioritised multi-race/ethnic data when it has been available.

⁷ In addition to these proposed methods, there has also been some discussion on whether a measure of “cultural strength” could be developed using a range of variables (e.g. language use, tribal affiliation) collected in surveys.

single and combination ethnic categories (e.g. Māori, European, and Māori-European), some form of prioritisation, or simply omitting people who give complex responses (see Liebler and Halpern-Manners 2008).

The demand for single output ethnicity data may also arise from political concerns, such as access to resources or political representation. In the U.S. the decision to allow more than one racial group to be collected was opposed by groups concerned that it might decrease the counts of some important minority groups (Korgen 1998). The desire to maximise the size of particular groups can be particularly important where resources are at stake. In New Zealand, when schools’ decile funding was still determined, in part, by enrolments of Māori and Pacific students, schools had an explicit incentive to maximise the counts of those students. In the health sector, some funding has an ethnicity weighting based on census data. For example, Services to Improve Access funding is made available to primary health organisations to reduce health inequalities by improving access to primary care services by high-need groups, particularly Māori, Pacific people and people on low incomes (Ministry of Health, no date). Maximising counts may also influence wider EEO policies because they set a baseline target for representation in public and private sector organisations.

Knowing a “main” ethnicity could be important for a range of reasons. In New Zealand we have little understanding of why people record more than one ethnic group, or what such responses are signalling. Where a historically and socially meaningful “blended” group has not arisen, it is problematic to assume people who report two or more groups have an equal sense of affiliation with all groups (implied by total response), or see it as a unique blended identity (combination response). Some people may be trying to accurately report ancestries that are complex, but their lived experiences may be primarily shaped by their affiliation, or appearance of belonging to, one group. A self-prioritised main ethnicity prompt would provide additional information with which to make more nuanced distinctions.

A main ethnicity designation could also be helpful in clarifying the relationship between ethnicity and other outcomes of interest. Because ethnic relations are often hierarchical with regard to the distribution of power, prestige and resources, it may be useful to be able to identify people who affiliate more closely with groups that have a history of disadvantage. Previous research (Chapple 2000, Kukutai 2004, forthcoming) has found that those who have a strong Māori identification seem to be more disadvantaged than those with “thinner” ties to Māori identity. Finally, there are some programmes, such as stop smoking campaigns and mental health programmes, that are tailored towards particular ethnic groups. Where appropriate, self-prioritisation data could be used to ensure that such programmes are more effectively targeted.

ETHNIC SELF-PRIORITISATION AMONG EARLY ADOLESCENTS

Connectedness in Young New Zealanders: Social Connectedness, Transitions, and Well-being” (the YC survey) is a three-year survey of early adolescents undertaken by the Roy McKenzie Centre at Victoria University, aided by the New Zealand Council for Educational Research. The first wave of data collection was taken in 2006 (n = 2,174); the second wave in 2007 (n = 1,914); and the final wave was recently completed. The rationale for the YC survey was to collect data that enabled researchers to explore how connectedness to family, peers, school and community affect wellbeing in early adolescents. It includes a suite of ethnicity items relating to ethnic identification, language use, cultural knowledge and community ties. Of the 78 schools included in the survey, two-thirds were located in Wellington and

Wairarapa; the remainder were from Kapiti, Taranaki, Hawke’s Bay and Auckland. Initially the YC team aimed for a 50:50 split between New Zealand European and Māori youth, but this was not achievable. In wave one, the majority of participants were in Years 6, 8 and 10. A fuller description of the sample can be found in Kukutai 2008. The selective coverage of the YC survey means the findings are not nationally representative and therefore cannot be generalised to all early adolescents in New Zealand. Nevertheless, it offers a rich source with which to explore the patterns of ethnic identification and self-prioritisation in ways that are not possible in nationally representative surveys such as the census.

Table 2 shows the distribution of single, dual and multiple (three or more) ethnic group responses in the YC survey, as well as for children aged 10–14 years at the time of the 2006 Census. It shows that the percentage of youth recording more than one ethnic group in the YC survey (30%) was double that of 10–14-year-olds in the census (16%). The recording of three or more ethnic groups was especially pronounced in the YC survey, but the percentage that failed to record a response to the ethnic group question was lower.

There are several reasons that may account for the higher proportion of dual and multi-ethnic reporting in the YC survey, including:

- the selectivity of participating schools and participants
- the regional concentration of the survey
- the prompt to the ethnic group question, which may have encouraged the recording of “symbolic” ethnicities (Gans 1979) alongside those with which youth held a more meaningful attachment⁸
- the way in which the YC survey was promoted and framed in the lead-up to being carried out
- self-reporting in the YC survey versus a high likelihood of proxy reporting in the census⁹
- different modes of data collection—computer-assisted in the YC survey versus a write-in questionnaire for the census (for a discussion of questionnaire mode effects, see Dillman and Christian 2005).

Table 2 Single, Dual and Multiple Ethnic Group Reporting in Wave 1, Youth Connectedness survey, 2006, and 2006 Census of Population and Dwellings, Youth aged 10–14 years

Number of ethnic groups reported	YC survey		2006 census	
	N	%	N	%
One	1,492	68.7	244,854	80.1
Two	480	22.1	41,688	13.6
Three or more	161	7.4	8,214	2.7
Don’t know	5	0.2	351	–
Not stated	35	1.6	10,899	3.6
Total	2,174	100.0	306,006	100.0

Note: “–” indicates figure is too small to be expressed.

⁸ The wording of the ethnicity question in the YC survey was the same as for the census, but was preceded by the prompt: “Every person is part of an ethnic group, sometimes two or more ethnic groups. Some names of ethnic groups are: Samoan, Chinese, Maori, Tongan, New Zealand European.”

⁹ Although there is no way of knowing who completes an individual’s census form, researchers have often worked on the assumption that children under the age of 15 years (or sometimes under 18 years) have their form completed for them by a third person, typically a parent or caregiver (Brunsma 2005, Roth 2005).

Table 3 provides a more detailed breakdown of the ethnic group responses recorded in both surveys using combination categories. If standard classification procedures are followed and data are aggregated at the highest level into broad ethnic groupings or categories, then combined pan-ethnic responses (e.g. New Zealand European and British; Samoan and Tongan) are not treated as dual or multi-ethnic.¹⁰ Given that our key interest is in people who report more than one group, we have preserved the recording of complex ethnic group responses.

Table 3 shows that, among youth who recorded one ethnic group in the YC survey, the percentage of European, Māori and Pacific youth closely resembled the census distributions, whereas Asian and “other” ethnic groups were under-represented (see Kukutai 2008 for disaggregated data on specific groups and how “other” responses were categorised). A Māori–European combination was recorded by 12.5% of YC participants, compared with 8.6% of early adolescents in the census. However, dual identification was lower overall in the census. If we restrict the comparison to dual responses, the share of Māori–European combinations was somewhat higher in the census ($25,311/41,685*100$) than in the YC survey ($266/480*100$).

The next-most-common dual combination was for two European ethnicities – one of which was typically New Zealand European. When some other European group was recorded it was usually British (e.g. English, Scottish). Among the children who recorded three ethnic groups, the most common combination was Māori in conjunction with Pacific and European ethnic groups. Only slightly fewer youth recorded Māori in combination with two European ethnic groups. Analysis not shown here found that the reporting of more than one group also varied significantly, depending on the group. Of all youth who identified as Māori, two-thirds did so as part of a dual or multiple ethnic response. For European responses, however, less than one-third were reported as part of a combined response. There was no significant age difference in the number of ethnic groups reported, and a small gender difference, with boys more likely than girls to record just one ethnic group (73% versus 68%, $p < .05$ level of significance).

¹⁰ The Standard Classification of Ethnicity is a four-tier representation of the nation’s ethnic composition, with level 1 representing the simplest form and level 4 the most complex (Statistics New Zealand 2005). Level 1 comprises six categories: European, Māori, Pacific Peoples, Asian, Middle Eastern, Latin American, African (MELAA), and Other Ethnicity; for economy and clarity, MELAA is subsumed in the Other ethnicity category in this paper.

Table 3 Ethnic Groups Reported in Wave 1, Youth Connectedness survey, 2006, and 2006 Census of Population and Dwellings

	YC survey		2006 census	
	Number	%	Number	%
<i>One ethnic group</i>				
European	1,049	49.1	147,501	50.0
Māori	217	10.2	30,969	10.5
Pacific	146	6.8	17,826	6.0
Asian	40	2.0	23,406	7.9
Other ethnic group	40	1.9	25,152	8.5
Two ethnic groups				
European & Māori	266	12.5	25,311	8.6
European & European	60	2.8	1,587	0.5
European & Pacific	36	1.7	3,765	1.3
Māori & Pacific	25	1.2	2,970	1.0
Other dual combinations	93	4.4	8,052	2.7
Three ethnic groups				
European, Māori & Pacific	25	1.2	2,637	0.9
Two European & Māori	22	1.0	2,163	0.7
Other combinations	64	3.0	1,734	0.6
At least four ethnic groups				
Four	38	1.6	1,206	0.4
Five or more	12	0.7	477	0.2
Total	2,134	100.0	294,756	100.0

We now turn to our primary interest: whether dual and multi-ethnic youth in the YC survey were willing and/or able to self-prioritise a main ethnic group when asked to do so. The focal question asked: “If you belong to more than one ethnic group, do you have a main ethnic group? Which is the main ethnic group you belong to?” In addition to the nine categories given in the ethnic group question, the following responses were also provided: “I belong to just one ethnic group”, “I have no main ethnic group”, “It depends on who I am with”, and “Don’t know”. The question did not immediately follow the ethnic group question, but followed a series of items related to how participants felt about their nominated ethnic group(s). For the 641 youth who recorded at least two ethnic groups, their prioritisation responses are shown in Table 4.

Table 4 Ability to Self-prioritise Ethnic Group, Youth that Reported More than One Ethnic Group, Wave 1, Youth Connectedness survey, 2006

Self-prioritisation response	N	%
Able to choose main ethnic group	474	74.0
No main ethnic group	63	9.8
Depends on who with	17	2.7
Don't know main ethnic group	51	8.0
Belongs to just one	7	1.1
No response stated	29	4.5
Total people	641	100.0

The key finding is that three-quarters of dual and multi-ethnic youth in the survey were able to self-prioritise a main ethnic group when prompted.¹¹ The share of participants who indicated they did not know, or did not have, a main ethnic group was fairly similar at 8.0% and 9.8%, respectively. In the absence of cognitive testing, the distinction between not knowing and not having is unclear. Whereas the former implies lack of knowledge or indecision, the latter suggests a more conscious rejection of having to choose. However, it may be that not knowing *and* not having a main ethnic group are simply different ways of articulating discomfort with having to choose between elements of one's ethnic identity. Non-prioritisation may also denote feeling an equal sense of belonging to two or more groups, or occupying a kind of “third space” (Bhaba 1990) where new identities or “hybridities” are forged.

Just under 3% explicitly indicated that their main ethnic group was situational, depending on who they were with. This was considerably lower than shifts in ethnic identification found in U.S. surveys (Harris and Sim 2002), but is not surprising. People who change their identification in different contexts may not necessarily be aware of this, nor respond in such a way when asked about it directly. As expected, very few dual and multi-ethnic youth stated that they belonged to just one group. Finally, almost 5% of dual and multi-ethnic youth did not record a response to the main ethnic group question, which is notably higher than the proportion who skipped the ethnic group question (1.6%). There is no way of knowing why participants did not respond to the prioritisation prompt.

Ideally it would be useful to know how prioritisation responses varied across specific ethnic group combinations. Unfortunately the modest sample size, and the predominance of Māori–European responses, precluded detailed analysis. Given these limitations, Table 5a simply shows the percentage of youth who were able to prioritise for the five largest combinations. Table 5b extends the analysis to specify *which* group was prioritised in European–Māori combinations, in other dual responses, and in three or more responses. The small numbers preclude a detailed analysis of the non-prioritised responses, such as “no main” or “don't know” for each combination.

¹¹ We note that this result aligns with the results from another recent survey of New Zealand youth. The Ethnicity and Achievement Survey of Year 9 students was undertaken in 2008 by Melinda Webber as part of her doctoral dissertation research. Of the 756 youth surveyed, 227 (30%) reported more than one group, of which 183 (81%) reported a main ethnic group (M. Webber, preliminary findings from the Ethnicity and Achievement Survey, 2008, personal communication, 2009).

Table 5a Self-prioritisation of Youth who Reported More Than One Ethnic Group, Five Largest Combinations, Wave 1, Youth Connectedness survey, 2006

Combinations	Prioritised a main ethnic group		Total
	N	%	N*
European & Māori	208	81.9	254
European & European	43	74.1	58
European & Pacific	21	67.7	31
Māori & Pacific	20	83.3	24
European, Māori & Pacific	20	80.0	25
Total	312	...	393

* Excludes no response stated (n = 20).

Note: “...” indicates not applicable.

Table 5b Self-prioritisation of Youth who Reported More Than One Ethnic Group, Select Combinations, Wave 1, Youth Connectedness survey, 2006

Self-prioritisation response	N	%
<i>European & Māori</i>		
European	114	54.8
Māori	92	44.2
Non-Māori, non-European	2	1.0
	208	100.0
<i>Other dual combinations</i>		
European	80	54.1
Māori	19	12.8
Non-Māori, non-European	49	33.1
	148	100.0
<i>Three or more ethnic groups</i>		
European	49	41.5
Māori	38	32.2
Non-Māori, non-European	31	26.3
Total	118	100.0

Note: n = 474.

The ability to self-prioritise was highest among youth who reported dual affiliations that included Māori, and lowest among European–Pacific youth. However, the small number in four of the combined categories, and the lack of statistical significance, means the results are indicative only. The willingness and/or ability to self-prioritise was somewhat higher for participants who recorded three or more ethnic groups than for those who recorded a dual combination other than European and Māori. Although one may expect that choosing a main group would be more difficult the greater the number of ethnic groups an individual identified with, it may be that third or fourth ethnicities are largely “symbolic” (Gans 1979) in terms of holding meaning in everyday life.

Table 5b shows that, of the youth who identified as both Māori and European *and* self-prioritised, the majority chose European over Māori, with a difference of about 10 percentage points. Interestingly, Kukutai (2004) found a similar pattern of self-prioritisation responses among women identified as Māori and European in the 1995 New Zealand Women: Family,

Education and Employment (NZW: FEE) survey of women aged 20–59 years. Among the 183 women who recorded Māori and European ethnic groups, 42% identified mainly as European, 37% identified mainly as Māori, and the remainder could not choose.¹² Among those who did self-prioritise, the European/Māori split was 54/46 – remarkably close to the distribution of responses in the YC survey.

Some may interpret these findings as evidence of a bias towards European ethnicities among people with both Māori and European heritage. Such an interpretation would be misleading. In the first instance, our analysis is based on self-identification rather than ancestry or parental ethnicities. As we noted earlier, these concepts are not synonymous. Previous parent–child studies suggest that some youth who identified as Māori only or European only in the YC survey would be considered multi-ethnic on the basis of their parental ethnicities (Callister 2003, Howard and Didham 2005, Kukutai 2007). All of those studies found that children with one Māori and one European parent were more likely to be designated as Māori only than as European only.¹³ Historically, the pattern has been for people of Māori–European heritage to simplify their ethnic self-identification to Māori (Buck 1924, Metge 1964, Pool 1991). These complex patterns highlight the need to be clear about the conceptual basis underlying the use of concepts such as “mixed” and “multi-ethnic”.

SUMMARY AND CONCLUSION

This research was undertaken with a view to exploring how ethnic self-prioritisation may help us better understand the complexity of multiple-ethnic data and its potential usage as an output method. The key finding was that almost three-quarters of youth who identified with more than one ethnic group in the YC survey were willing and able to choose a main group when asked to do so. This was in spite of the inclusion of viable alternatives which gave participants every opportunity to opt out of choosing.

Because Māori–European reports comprised the vast majority of dual ethnicity responses, we were particularly interested in which group was most often prioritised. Of the dual identified Māori–European children who could choose a main group, more chose European over Māori. This would have several implications if used as a method of outputting ethnicity data. To illustrate, if the YC pattern of prioritisation responses were applied to the 2006 census data for all ages, the Māori Ethnic Group count would be reduced from 565,329 to 395,051.¹⁴ In the context of population-based funding, this would decrease the portion allocated to Māori, and decrease the size of the Māori population relative to Europeans. Substantively, this is

¹² The main ethnic group question immediately followed the ethnic group question. Women who reported more than one group were asked: “Please tell me which one of these is the main ethnic group you identify with?” Possible responses included “more than one” and a combined “don’t know/no”.

¹³ Kukutai’s study (2007) used data from the NZW:FEE in which mothers reported their child’s ethnicity. Callister (2003) and Howard and Didham (2005) used census data, which makes it impossible to know who reported the child’s ethnicity, though it is highly unlikely that most children (0–14 years) would be given the opportunity to self-identify in this particular collection. In addition, in the census data we do not know whether the parents chose only one ethnic group for themselves when their own ancestry may have been more complex. Therefore census-based studies on the transmission of ethnicity to children give us only partial information, and more detailed ethnographic studies are needed to understand the transmission of ethnicity between generations.

¹⁴ The number of people who reported more than one ethnic group including Māori was 266,934, of whom 119,803 would be counted as European, 96,656 as Māori, 2,165 as some other non-Māori, non-European grouping, and the remainder would be unable to be allocated to a single group (i.e. did not prioritise). The number who identified as mainly Māori would then be added to the number of single-ethnic Māori (n = 298,395).

similar to the effect the old system of prioritisation-by-proxy had on non-Māori groups, notably Pacific peoples, but which continues to be used in some areas of health and education research. As an output method, self-prioritised data would result in the loss of information that may be important in research and policy making. However, arguably this is what currently occurs with total count data in which multiple-ethnic identification is “hidden”. There is also the matter of how to allocate those who cannot or will not choose a main ethnic group. In the YC survey about one-fifth of the youth who reported more than one group either did not know, or did not have, a main ethnic group. Not being able to choose is a valid response that would need to be accounted for conceptually and statistically.

The potentially significant effects that self-prioritisation would have on ethnic group counts may have political implications. For example, some people may feel that a main ethnicity measure is a tool designed to reduce the count of Māori. As Kukutai and Didham (2009) note elsewhere in this issue, ethnicity and ethnic groups are created and sustained through inter-group processes that, at times, involve competitive struggles for political power and material resources. However, it is for methodological and substantive (rather than political) reasons that we do not think it appropriate to use self-prioritisation as a data reduction tool in isolation from other outputting options.

Our analysis has focused on the implications of a main ethnicity prompt for outputting purposes, but it also raises the question of how to deal with ethnic complexity at the input stage. When filling in paper or computer surveys we do not know what people intend their response to mean. For example, some youth who checked the Māori and New Zealand European boxes in the YC survey may see both groups as reasonably distinct. In such cases, self-prioritisation could signal the group with which youth felt a stronger connection or affiliation. Others recording the same two groups may see their response as denoting a blended group distinct from either Māori or European. Whether this group is Māori–European or European–Māori might be showing up in the self-prioritisation data. In-depth qualitative research would be needed to understand how complex ethnicity is being constructed for adolescents.

Although self-prioritisation is unlikely to receive wide support as a method for reducing the complexity of multiple-ethnic data, it could have some important uses for expanding complexity. For example, previous analysis of main ethnicity data has shown important socio-economic and demographic differences between people who identified as both Māori and European but self-prioritised as Māori versus European (Kukutai 2004). Given the empirical relationship that has consistently been demonstrated between ethnicity and socio-economic disadvantage in New Zealand, the information delivered by a main ethnic group question may be valuable for better specifying the association between ethnicity and socio-economic outcomes that a good deal of policy research is concerned with.

The limited scope of this paper means that its chief contribution has been to describe ethnic identification patterns rather than to identify the factors underlying response patterns, or to explain what responses to a main ethnic group question may mean. Fortunately, the inclusion of the main ethnicity prompt in all waves of the YC study, along with a raft of questions relating to different kinds of ethnic attachment, means these questions can be pursued within the period of adolescence. Understanding how ethnicity may change over an individual’s life cycle would not only require longitudinal data from birth to death but also regular questioning about ethnic affiliation. Future research that attempts to better specify the relationship between ethnic identification, ethnic identity and attachment, and stratification

will be valuable for advancing the understanding of ethnic identification dynamics and the purposes for which ethnic data can best be used.

REFERENCES

- Allan, J. (2001) *Classification and Issues: Review of the Measurement of Ethnicity*, Statistics New Zealand, Wellington.
- Bhaba, H. (1990) “The third space: Interview with Homi Bhaba” in J. Rutherford (ed.) *Identity, Community, Culture, Difference* (pp. 207–221), Lawrence and Wishart, London.
- Bhopal, R. (2004) “Glossary of terms relating to ethnicity and race: For reflection and debate” *Journal of Epidemiology and Community Health*, 58:441–445.
- Brittingham, A. and G. de la Cruz (2004) *Ancestry 2000: Census 2000 Brief*, U.S. Census Bureau, Washington, D.C.
- Brunsmma, D. (2005) “Interracial families and the racial identification of mixed-race children: Evidence from the early childhood longitudinal study” *Social Forces*, 84:1131–1157.
- Buck, P. (1924) *The Passing of the Maori: Extract from Transactions and Proceedings of the New Zealand Institute*, Government Printer, Wellington.
- Burton, J., A. Nandi and L. Platt (2008) *Who Are the UK’s Minority Ethnic Groups? Issues of Identification and Measurement in a Longitudinal Study*, Working Paper 2008–26, Institute for Social & Economic Research, University of Essex.
- Callister, P. (2003) “The allocation of ethnicity to children in New Zealand: Some descriptive data from the 2001 Census” paper presented at the *Population Association of New Zealand Conference*, 3–4 July, Christchurch, www.callister.co.nz
- Callister, P. (2004) “Māori/non-Māori ethnic intermarriage” *New Zealand Population Review*, 29(2):89–105.
- Callister, P. and R. Didham (2009) “Who are we?: The Human Genome Project, race and ethnicity” *Social Policy Journal of New Zealand*, 36.
- Carter, K.N., M. Hayward, T. Blakely and C. Shaw (2009) “How much and for whom does self-identified ethnicity change over time in New Zealand?: Results from a longitudinal study” *Social Policy Journal of New Zealand*, 36.
- Census and Statistical Office (1927) *Results of a Census of the Dominion of New Zealand*, Government Printer, Wellington.
- Chan, W.C., C. Wright, T. Riddell, S. Wells, A.J. Kerr, G. Gala and R. Jackson (2008) “Ethnic and socioeconomic disparities in the prevalence of cardiovascular disease in New Zealand” *New Zealand Medical Journal*, 121(1285):11–20.
- Chapple, S. (2000) “Maori socio-economic disparity” *Political Science*, 52(2):101–15.
- Didham, R. (2005) *Understanding and Working with Ethnicity Data: A Technical Paper*, Statistics New Zealand, Wellington.
- Dillmann, D. and L. Christian (2005) “Survey mode as a source of instability in responses across surveys” *Field Methods*, 17:30–52.
- Gans, H. (1979) “Symbolic ethnicity” *Ethnic and Racial Studies*, 2:1–20.
- Goldstein, J. and A. Morning (2000) “The multiple-race population of the United States: Issues and estimates” *Proceedings of the National Academy of Sciences*, 97:6230–6235.
- Harris, D. and J. Sim (2002) “Who is multiracial? Assessing the complexity of lived race” *American Sociological Review*, 67:614–627.
- Howard, S. and R. Didham (2005) *Ethnic Intermarriage and Ethnic Transference amongst the Maori Population: Implications for the Measurement and Definition of Ethnicity*, Statistics New Zealand, Wellington.

- Keddell, E. (2007) “Cultural identity and the Children, Young Person’s and Their Families Act 1989: Ideology, policy and practice” *Social Policy Journal of New Zealand*, 32:49–71.
- Korgen, K.O. (1998) *From Black to Biracial: Transforming Racial Identity among Americans*, Praeger, Westport, CT.
- Kukutai, T. (forthcoming) “Building brown boundaries in New Zealand: Representations of Maori identity in the Census” in P. Sköl and P. Axelsson (eds.) *Indigenous Peoples and Demography: The Complex Relation between Identity and Statistic* (chapter 2), Berghahn Books, New York and Oxford.
- Kukutai, T. (2004) “The problem of defining an ethnic group for public policy: Who is Māori and why does it matter?” *Social Policy Journal of New Zealand*, 23:86–108.
- Kukutai, T. (2007) “White mothers, brown children: Ethnic identification of Māori–European children in New Zealand” *Journal of Marriage and the Family*, 69:1150–1162.
- Kukutai, T. (2008) *Ethnic Self-Prioritisation of Dual and Multi-Ethnic Youth in New Zealand: A Discussion Paper*, Statistics New Zealand, Wellington.
- Kukutai, T. and R. Didham (2009) “In search of ethnic New Zealanders: National naming in the 2006 Census” *Social Policy Journal of New Zealand*, 36.
- Kukutai, T. and V. Thompson (2007) “Doing diversity ‘down under’: New Zealand’s ethnic enumeration practices in global perspective” paper presented at the *Population Association of New Zealand Conference*, 3–4 July, Te Papa Museum, Wellington, New Zealand.
- Leather, F. (2009) *Prioritising Data in an Increasingly Multi-ethnic Society*, IPS Working Paper WP09/05, Institute of Policy Studies, Wellington.
- Liebler, C. (2004) “Ties on the fringes of identity” *Social Science Research*, 33:702–723.
- Liebler, C.A. and A. Halpern-Manners (2008) “A practical approach to using multiple-race response data: A bridging method for public-use microdata” *Demography*, 45(1):143–155.
- Mays, V.M., N.A. Ponce, D.L. Washington and S.D. Cochran (2003) “Classification of race and ethnicity: Implications for public health” *Annual Review of Public Health*, 24:83–110.
- Metge, J. (1964) *A New Māori Migration: Rural and Urban Relations in Northern New Zealand*, Berg Publishers, Oxford, UK.
- Ministry of Health (no date) *Primary Health Care: Services to Improve Access*, Ministry of Health, Wellington.
- Morning, A. (2008) “Ethnic classification in global perspective: A cross-national survey of the 2000 Census round” *Population Research and Policy Review*, 27(2):239–272.
- Omi, M. and H. Winant (1994) *Racial Formations in the United States: From the 1960s to the 1990s* (2nd ed.), Routledge & Keegan Paul, New York.
- Pool, I. (1991) *Te Iwi Māori*, Auckland University, Auckland.
- Roth, W. (2005) “The end of the one-drop rule? Labeling of multiracial children in black intermarriages” *Sociological Forum*, 20:35–67.
- Statistics New Zealand (2004) *Report of the Review of the Measurement of Ethnicity*, Statistics New Zealand, Wellington.
- Statistics New Zealand (2005) *Statistical Standard for Ethnicity 2005*, Statistics New Zealand, Wellington.
- Sundborn, G., P.A. Metcalf, D. Gentles, R.K.R. Scragg, D. Schaaf, L. Dyal, P. Black and R. Jackson (2008) “Ethnic differences in cardiovascular disease risk factors and diabetes status for Pacific ethnic groups and Europeans in the Diabetes Heart and Health survey (DHAH) 2002–2003” *New Zealand Medical Journal*, 121(1281):28–39.

Tafoya, S., H. Johnson and L. Hill (2004) *Who Chooses to Choose Two: Multiracial Identity of Children with Parents of Different Races*, Russell Sage Foundation and Population Reference Bureau, Washington, D.C.

Xie, Y. and K. Goyette (1997) “The racial identification of biracial children with one Asian parent: Evidence from the 1990 Census” *Social Forces*, 76:547–70.

**HOW MUCH AND FOR WHOM DOES SELF-IDENTIFIED ETHNICITY CHANGE
OVER TIME IN NEW ZEALAND?
RESULTS FROM A LONGITUDINAL STUDY**

Kristie N Carter¹

Michael Hayward

Tony Blakely

Caroline Shaw

Health Inequalities Research Programme

School of Medicine and Health Sciences

University of Otago

Abstract

Ethnicity is often assumed to be a stable construct. However, much research in New Zealand has shown growth in the number of people reporting multiple ethnicities and changes in the ethnic composition of New Zealand, which may reflect social changes as well as changes in the construct of ethnicity. This study uses three years of data from the longitudinal Survey of Family, Income and Employment (SoFIE) to examine changes in self-identified ethnicity. Self-defined ethnicity is recorded every year and participants may record multiple ethnicities. A change in ethnicity was defined as any change in the reported ethnic group(s) of an individual over the first three waves of SoFIE. Overall, 8% of respondents changed ethnicity at least once during the three waves of the survey. The strongest predictor of changing self-identified ethnicity was Māori, Pacific and Asian ethnicity at wave 1, as well as reporting more than one ethnic group. Individuals who changed ethnicity were also more likely to be younger, to be born overseas, to live in a family with children, to belong to more deprived groups, and to have poorer self-rated health. This exploratory analysis has shown fluidity in the concept of self-identified ethnicity, but more longitudinal research is needed to further clarify the (in)stability of ethnicity over time.

INTRODUCTION

Ethnicity matters. It matters for individuals, for groups and for our nation. It matters in terms of shaping individual identity, understanding inequalities and targeting policy across a wide range of areas such as health, education and welfare. In New Zealand much work has been done on defining and measuring ethnicity, but it remains a challenging, and fluid, area (Statistics New Zealand 2004, Callister et al. 2008).

¹ Acknowledgements

We would like to thank Paul Callister for his review and comments on this paper. We would also like to thank the two anonymous reviewers, who provided very helpful comments. SoFIE-Health is primarily funded by the Health Research Council of New Zealand as part of the Health Inequalities Research Programme. Establishment funding was also received from the University of Otago, Accident Compensation Corporation of New Zealand (ACC), and the Alcohol Liquor Advisory Council (ALAC).

Access to the data used in this study was provided by Statistics New Zealand in a secure environment designed to give effect to the confidentiality provisions of the Statistics Act 1975. The results in this study and any errors contained therein are those of the author, not Statistics New Zealand.

Correspondence

All correspondence can be directed to Kristie Carter, email: kristie.carter@otago.ac.nz

The concept that individuals should identify their own ethnicity is well established in New Zealand. However, an individual's ethnic identity is part of a wider social process and is influenced by their own perceptions of ethnicity and what they perceive others' perceptions are, within the world in which they live (Fenton 1999). Often it is assumed (if only as a simplification) that ethnicity is fixed over time and that ethnic boundaries are well defined. In reality an individual will identify with more than one ethnic group and/or may change their ethnic identity over time or in different environments (Callister et al. 2008). Indeed, affiliation with more than one ethnic group is relatively common: in the 2006 census 7.8% of respondents aged 15 years and older reported multiple ethnic groups (Statistics New Zealand 2007). Affiliation with multiple ethnic groups was highest in younger age groups and among those recording Māori or Pacific as one of their ethnic groups.

Ethnic mobility is defined as a change in ethnic affiliation over time. It is an important aspect of social change and represents an area of considerable interest, both in New Zealand and internationally. There are three possible sources of change in responses about ethnic affiliation: unreliability in measurement, changes due to alterations in the ethnicity question, and (the focus of this paper) conscious changes in ethnicity (Simpson and Akinwale 2007). Conscious changes may involve an alteration of ethnic identification (switching from one ethnicity to another), the addition of an ethnic group to (complexification), or deletion of a group from (simplification), a previous set of identifications.

Conscious changes in ethnic affiliation(s) may occur for any number of reasons. For example, changes may occur when children reach an age when they define ethnicity for themselves rather than having it determined by a parent or guardian (Kukutai 2008). People may answer a census question differently to how they answer a hospital form; the former may be construed as an opportunity to make a more political statement (e.g. the "New Zealander" response is far more common on census data than in other administrative data sets), and the census is answered in the privacy of one's home (Callister et al. 2008).

There are a number of other reasons for people identifying their ethnicity differently over time or context, such as social stigmatisation or alienation, changes in personal, professional or social groups, or changes in the political or economic society. Comparing ethnic group responses between different data sets in New Zealand may be invalid because the environment or context can change responses. In Canada, for example, Guimond (2006) found that the census count of the population with aboriginal origin went from 711,000 to 1,102,000 persons, with a large part of this growth occurring between 1986 and 1991. He noted that this fast growth could not be explained by natural and migratory increases alone, and that much ethnic mobility was occurring. This growth was particularly strong in urban areas and was associated with a strong rise in the post-secondary-educated graduates of aboriginal origin. Guimond concluded that it is important to understand legislative and social changes that may be a source of ethnic mobility. Each ethnic response is "valid" at the time and within the context in which it was asked.

In New Zealand, research into ethnic mobility has been limited. However, in a cross-sectional study of inter-censal change, Coope and Piesse (2000) found there was considerable mobility within some ethnic groups, with, for example, a 23% inflow and 6% outflow for the Māori ethnic group in 1996 compared to the 1991 group (Coope and Piesse 2000). There are a number of possible reasons for this, including changes in the ethnicity question between censuses, changes in the socio-political environment, ethnogenesis (the establishment of new ethnic categories such as "New Zealander"), and intermarriage (Callister et al. 2005, Howard

and Didham 2005, Kukutai 2007, Callister et al. 2008), as well as changes in the political structure.

In-depth analysis of changes in ethnicity and the factors associated with such mobility is only possible using consistent questions repeated over several years of a longitudinal study for the same individuals.² There is, however, no such published New Zealand empirical research, so in this exploratory analysis we outline changes in self-identified ethnicity over the first three waves of the longitudinal Survey of Family, Income, and Employment (SoFIE). The ethnicity question was asked directly of participants, face to face in their own home, at each consecutive wave without the interviewer or interviewee having access to responses to previous waves. Specifically, the research questions addressed in this paper are:

- What proportion of people changed their self-identified ethnicity over the three years?
- How does this proportion vary by individual socio-demographics?

METHODS

Study Data

We utilised data from the first three waves (October 2002/03, 2003/04, 2004/05) of SoFIE (wave 1 to 3 data, Version 4) (Carter et al. 2008). SoFIE is a nationally representative fixed-panel longitudinal survey of the usually resident population living in private dwellings. The initial SoFIE sample comprised approximately 11,500 responding private households (response rate of 77%) with over 22,000 adults responding in wave 1, reducing to just over 20,000 in wave 2 (91%) and 18,300 in wave 3 (83% of wave 1 responders). In SoFIE, face-to-face interviews are used to collect information annually on demographics and the social and economic characteristics of adults.

In this analysis, data were restricted to adults (15 years or older) who answered the ethnicity question in all three waves.

Measures

The following ethnicity question was asked in each wave:

“Looking at showcard 7, choose as many responses as you need to say which ethnic groups you belong to.”

² In 2008 research got underway on those students whose ethnicity recorded in tertiary education differs from that recorded at school (Baldwin 2008).

Showcard 7

11. New Zealand European / Pakeha
12. other European
13. Māori
14. Samoan
15. Cook Island Maori
16. Tongan
17. Niuean
18. Tokelauan
19. Fijian
20. other Pacific Peoples
21. Southeast Asian
22. Chinese
23. Indian
24. other Asian
25. other ethnic group

This ethnicity variable was then coded to the following level 1 categories: NZ European / Pākehā, Māori, Pacific, Asian, and Other.

For the purposes of this paper we constructed four variables relating to ethnicity.

1. *Total ethnicity*. For simple cross-classifications we simply used the total counts of people identifying as Māori, Pacific, NZ European, Asian or “Other”. Note that the sum of the total counts will exceed 17,625 (total number of responding adults) due to people reporting two or more level 1 ethnic groups (total ethnic groups are not mutually exclusive).
2. *Combination ethnicities I*. We categorised people (at each wave) into those reporting just one level 1 ethnic group (“sole”), and two or more level 1 ethnic groups (“multiple”). Note that someone who self-identified with more than one Pacific or Asian ethnicity appears as “sole” using the level 1 categorisations in this paper.
3. *Combination ethnicities II*. We also constructed variables separately from the perspective of each of the level 1 groups. Thus, from the Pacific perspective one could be sole Pacific, Pacific plus at least one other group, or non-Pacific (any other ethnic group/s excluding Pacific).
4. *Changing ethnicity*. We classified anyone changing their self-identified ethnic group between waves 1 and 2 or between waves 2 and 3 as “change”. Respondents may “change” their self-identified ethnicity by adding or subtracting an ethnic group to/from their previous wave response (e.g. Pacific and NZ European in wave 1, and sole Pacific in wave 2 = “change”), or responding with a totally different category (e.g. sole Māori in wave 1 and sole NZ European in wave 2 = “change”).

The following demographic, social and economic variables have been used to explore the mechanisms discussed previously and their relationship with changing ethnic identification over the three waves of SoFIE. The following demographic characteristics were measured at the wave 1 interview: age, sex, legal marital status, family structure and household composition. It is hypothesised that younger populations are more likely to change their ethnicity because they are developing their own identity as they grow older. Marital status, family structure and household composition are used to investigate the influence of social mechanisms on changing ethnicity. Economic variables allow us to investigate whether changing ethnicity is more apparent in some social and economic groups. Household income

was derived by totalling adult annual personal income (before tax) from all sources received, Consumer Price Index adjusted, equivalised for household economies of scale using a New Zealand-specific Jensen Index (Jensen 1988), and categorised into quintiles based on the SoFIE population across waves 1 to 3. Labour-force involvement was defined as being either employed, not employed but seeking work, or not employed and not seeking work, at the time of the interview. The highest level of education was coded as no education, school, post-school vocational, or degree or higher qualification, across the three waves. The New Zealand Deprivation (NZDep2001) Index provides a neighbourhood-level (approximately 100 people) deprivation score (Salmond and Crampton 2002). The global self-rated health question (“In general would you say your health is excellent, very good, good, fair or poor?”) was classified as fair/poor versus remaining answers.

These analyses will provide a baseline for future analyses of SoFIE data (once more waves of data are available) looking at the influences of changes in social and/or economic circumstances (i.e. moving from child to adult status, getting married or becoming unemployed) have on changes in self-identified ethnicity over time.

ANALYSIS

All analyses were conducted using SAS 8.2 within the Statistics NZ Data Lab, Wellington. Exploratory analysis was conducted using cross-tabulations to identify respondents who change ethnicity between the waves, by demographic and socio-economic variables. Logistic regression analyses were used to investigate the relative association of change in ethnicity by baseline socio-demographic variables.

All counts and values in the tables have been randomly rounded (up or down) to the nearest multiple of five, and cells with counts less than 10 were rounded to a minimum of 10. As a result, table totals may differ from the sum of individual cells. Some row percentages in the tables may also sum to greater than 100 because the percentages were calculated according to the random rounded totals.

RESULTS

A total of 17,625 original sample members aged 15 years or older at the wave 1 interview and who had responded in all three waves were included in this analysis. Table 1 presents the ethnic composition of the SoFIE population across the first three waves of SoFIE. Over 83% of the population reported NZ/European as one of their ethnic groups, with around 11% Māori, 5% Pacific, 5% Asian and 2% Other ethnicity. There is little variation in the share of the total ethnic groups in the population at each wave (although individuals are changing groups between waves, as shown below).

The majority of people (about 95%) reported that they affiliated with only one ethnic group (Table 1). This was stable over all three waves: 5.6% of people in wave 1 reported affiliating with more than one ethnic group, and in wave 3 this declined to 4.9%. The distribution of multiple affiliations was not equal: proportionately Māori (38.3%) and Pacific people (20.8%) were more likely to report affiliation with more than one ethnic group than NZ European (5.3%), at wave 3. About 10% of Asian and other ethnic groups reported multiple affiliations. Younger respondents were also more likely to report multiple ethnic groups.

Table 1 Distribution of 17,625 SoFIE Respondents by “Sole” and “Multiple” Ethnic Groups

Level 1 ethnic group		Wave 1		Wave 2		Wave 3	
		N	%	N	%	N	%
Everyone	<i>Total</i>	17,625		17,625		17,625	
	Sole	16,640	94.4	16,735	94.9	16,760	95.1
	Multiple	990	5.6	890	5.1	865	4.9
NZ/European	<i>Total*</i>	14,660	83.2	14,655	83.1	14,630	83.0
	Sole	13,765	93.9	13,845	94.5	13,855	94.7
	Multiple [†]	895	6.1	810	5.5	780	5.3
Māori	<i>Total*</i>	1,925	10.9	1,885	10.7	1,835	10.4
	Sole	1,105	57.4	1,135	60.2	1,130	61.6
	Multiple [†]	815	42.3	750	39.8	705	38.4
Pacific	<i>Total*</i>	830	4.7	780	4.4	795	4.5
	Sole	635	76.5	615	78.8	635	79.9
	Multiple [†]	200	24.1	165	21.2	165	20.8
Asian	<i>Total*</i>	940	5.3	940	5.3	950	5.4
	Sole	845	89.9	865	92.0	855	90.0
	Multiple [†]	95	10.1	80	8.5	90	9.5
Other	<i>Total*</i>	320	1.8	305	1.7	315	1.8
	Sole	280	87.5	270	88.5	285	90.5
	Multiple [†]	40	12.5	30	9.8	30	9.5

* Total percentages are the proportional share of ethnic groups, by wave.

[†] Stated ethnic group plus at least one other level 1 ethnic group.

Table 2 shows the distribution of characteristics of respondents who had any change in their self-identified ethnicity between waves 1 and 2 and waves 2 and 3. There was no difference between males and females, but younger respondents were much more likely to change ethnic groups (e.g. 12.2% for 15–24-year-olds compared to 2.7% for those aged 75 years and over).

The strongest predictor of *changing* ethnicity between waves was ethnicity at wave 1. Using a total definition of ethnicity at wave 1, anyone self-identifying as “Other” (ie, any ethnicity other than NZ/European, Māori, Pacific or Asian) was the most likely to change ethnicity between waves (54.7%), followed by Māori (36.5%), Pacific (22.9%), and Asian (15.4%). NZ/European respondents were least likely to change ethnicity across the three waves (5.7%).

Alongside considering “total” ethnicity at wave 1, changing ethnicity was most likely among those people recording two or more ethnic groups – regardless of the actual combination. People self-identifying at wave 1 as NZ European and any other group, Māori and any other group, Pacific and any other group and Asian and any other group all had similar probabilities (over half) of changing ethnicity between waves: 56.4%, 57.1%, 62.5% and 63.2%, respectively. Sole NZ/European were the least likely (2.4%), and sole Asian and sole Pacific both had about a 10% probability of subsequent change in ethnic group. Sole Māori, however, had a 21.3% probability of changing ethnicity over waves.

Table 2 Distribution of the number of respondents reporting any change in ethnicity between waves 1 and 2 and waves 2 and 3, by wave 1 measures of socio-demographic characteristics

Wave 1	Any change in ethnicity		
	N	N	%
Total	17,625	1,420	8.1
Sex			
Male	8,075	645	8.0
Female	9,540	775	8.1
Age			
15–24	2,510	305	12.2
25–34	2,820	295	10.5
35–44	3,770	350	9.3
45–54	3,235	245	7.6
55–64	2,510	130	5.2
65–74	1,670	75	4.5
75+	1,110	30	2.7
Total ethnicity, wave 1			
NZ/European	14,660	830	5.7
Māori	1,925	700	36.5
Pacific	830	190	22.9
Asian	940	145	15.4
Other	320	175	54.7
Ethnic-specific combinations, wave 1*			
Sole NZ/European	13,765	325	2.4
NZ Euro + other gp(s)	895	505	56.4
Non-NZ/European	2,965	595	20.1
Sole Māori	1,105	235	21.3
Māori + other gp(s)	815	465	57.1
Non-Māori	15,695	725	4.6
Sole Pacific	635	65	10.2
Pacific + other gp(s)	200	125	62.5
Non-Pacific	16,785	1,230	7.3
Sole Asian	845	85	10.1
Asian + other gp(s)	95	60	63.2
Non-Asian	16,675	1,280	7.7
Born in NZ			
Yes	13,950	1,050	7.5
No	3,670	375	10.2
Marital status			
Divorced, widowed, separated	2,995	195	6.5
Married	9,440	640	6.8
Never married	5,180	585	11.3

How much and for whom does self-identified ethnicity
change over time in New Zealand?

Std family type			
Couple only	5,410	305	5.6
Couple with children	7,300	695	9.5
Sole parent	1,700	210	12.4
Not in a family nucleus	3,210	210	6.5
Household composition			
One family	14,100	1,165	8.3
Other multi-person household	830	75	9.0
Two or more families	590	75	12.7
One-person house			
Labour-force status			
Employed	11,215	900	8.0
Not employed, looking	395	35	8.9
Not employed, not looking	6,010	485	8.1
Maximum education			
Degree/higher	2,585	210	8.1
No qualification	4,145	330	8.0
Post-school vocational qual.	6,255	520	8.3
School qual.	4,630	360	7.8
Equiv. household income			
Q1: low – < \$21,078	2,315	260	11.2
Q2: \$21,078 – < \$34,010	4,130	345	8.4
Q3: \$34,010 – < \$49,379	3,520	295	8.4
Q4: \$49,379 – < \$72,280	3,645	255	7.0
Q5: \$72,280 – high	4,005	265	6.6
NZDep			
Q1 (least)	3,445	155	4.5
Q2	3,615	245	6.8
Q3	3,095	230	7.4
Q4	3,880	355	9.1
Q5 (most)	3,580	435	12.1
Self-rated health			
Excellent	6,610	495	7.5
Very good	5,855	465	7.9
Good	3,645	325	8.9
Fair/poor	1,510	135	8.9

Considering other socio-demographic factors, there were moderate increases in the probability of changing ethnicity for those: not born in New Zealand, never married, living in a family with children (i.e. couple with children, or sole parent), and in good or fair/poor self-rated health (Table 2). (It must be noted that these are all crude percentages, and likely to be confounded by age and ethnicity at least – hence the multivariable analyses below.) Finally, the crude analyses demonstrate two- to three-fold differences in the chance of changing ethnic groups for those with low income or living in a deprived neighbourhood.

Table 3 presents results from logistic regression models. The first column contains univariate regressions, which are consistent with the results in Table 2, aside from being on an odds ratio scale. However, any of the univariate associations attenuate once all factors are adjusted for in the multivariate analyses. Multivariate logistic regression analyses were conducted by each ethnic group at wave 1, both to investigate what factors influence changing ethnicity within the main ethnic groupings and also to overcome the problem of non-mutually exclusive ethnic groups.

Generalising across the four multivariate models, younger age, not being born in New Zealand, living in a family with children, living in a deprived neighbourhood, and having poorer self-rated health all tended to be moderate to strong predictors of changing ethnicity. Income and education had modest independent associations only. Considering the four ethnic multivariate models separately, that for NZ/European had instances of varying associations; most notably, country of birth was not associated with changing ethnicity.

Table 3 Odds Ratios (95% Confidence Interval) of any Change in Ethnicity across Waves 1 to 3 of SoFIE by Socio-demographics for Univariate and Multivariate Logistic Regression Analyses

Wave 1	Univariate	Multivariate			
		European	Māori	Pacific	Asian
Sex					
Male	1	1	1	1	1
Female	1.0 (0.9–1.1)	0.9 (0.8–1.1)	0.9 (0.8–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)
Age					
15–24	1	1	1	1	1
25–44	0.8 (0.7–0.9)	0.9 (0.7–1.1)	0.8 (0.7–1.0)	0.9 (0.7–1.1)	0.9 (0.7–1.0)
45–64	0.5 (0.4–0.6)	0.8 (0.7–1.1)	0.7 (0.5–0.9)	0.7 (0.5–0.8)	0.6 (0.5–0.8)
65–74	0.3 (0.3–0.4)	0.7 (0.5–1.0)	0.5 (0.3–0.8)	0.4 (0.3–0.6)	0.4 (0.3–0.6)
75+	0.2 (0.1–0.3)	0.6 (0.4–1.0)	0.4 (0.2–0.6)	0.3 (0.2–0.4)	0.3 (0.2–0.4)
Born in NZ					
Yes	1	1	1	1	1
No	1.4 (1.2–1.6)	1.0 (0.8–1.2)	3.5 (3.0–4.1)	1.5 (1.3–1.7)	1.4 (1.3–1.7)
Legal marital status					
Never married	1.8 (1.6–2.0)	1.1 (0.9–1.3)	1.0 (0.9–1.3)	1.4 (1.1–1.6)	1.4 (1.1–1.6)
Divorced, widowed	1.0 (0.8–1.1)	1.0 (0.8–1.3)	1.0 (0.8–1.2)	1.1 (0.9–1.4)	1.1 (0.9–1.3)
Married	1	1	1	1	1
Std family type					
Couple only	1	1	1	1	1
Couple with children	1.7 (1.5–2.0)	1.0 (0.8–1.2)	1.2 (1.0–1.4)	1.3 (1.1–1.5)	1.3 (1.1–1.5)
Sole parent	2.3 (1.9–2.8)	0.9 (0.7–1.2)	1.0 (0.8–1.3)	1.2 (1.0–1.5)	1.3 (1.1–1.6)
Not in a family nucleus	1.2 (1.0–1.4)	1.0 (0.8–1.2)	1.0 (0.8–1.3)	0.8 (0.7–1.0)	0.9 (0.7–1.1)
Maximum education					
Degree or higher	1	1	1	1	1
School qual.	1.0 (0.8–1.1)	0.8 (0.7–1.0)	0.8 (0.6–1.0)	0.8 (0.7–1.0)	0.8 (0.6–0.9)
Post-school qual.	1.0 (0.9–1.2)	1.1 (0.9–1.3)	0.9 (0.7–1.1)	1.0 (0.9–1.2)	1.0 (0.8–1.2)
No qualification	1.0 (0.8–1.2)	0.9 (0.7–1.1)	0.8 (0.6–1.0)	1.0 (0.8–1.2)	0.9 (0.8–1.2)

How much and for whom does self-identified ethnicity
change over time in New Zealand?

Labour-force status					
Employed	1	1	1	1	1
Not employed, looking	1.2 (0.9–1.7)	0.7 (0.5–1.0)	0.7 (0.5–1.1)	0.8 (0.6–1.1)	0.8 (0.6–1.2)
Not employed, not looking	1.0 (0.9–1.1)	1.0 (0.8–1.1)	1.0 (0.9–1.2)	1.0 (0.9–1.2)	1.0 (0.9–1.1)
Equiv. household income					
Q1: low – < \$21,078	1.8 (1.5–2.1)	0.9 (0.7–1.1)	1.0 (0.8–1.3)	1.2 (1.0–1.5)	1.2 (1.0–1.5)
Q2: \$21,078 – < \$34,010	1.3 (1.1–1.5)	0.9 (0.7–1.1)	1.0 (0.8–1.2)	1.1 (0.9–1.4)	1.1 (0.9–1.4)
Q3: \$34,010 – < \$49,379	1.3 (1.1–1.5)	0.9 (0.7–1.1)	0.9 (0.8–1.2)	1.0 (0.8–1.2)	1.0 (0.8–1.2)
Q4: \$49,379 – < \$72,280	1.1 (0.9–1.3)	0.8 (0.7–1.0)	0.9 (0.7–1.1)	0.9 (0.8–1.1)	0.9 (0.8–1.1)
Q5: \$72,280 – high	1	1	1	1	1
NZDep					
Q1 (least)	1	1	1	1	1
Q2	1.6 (1.3–1.9)	1.3 (1.0–1.6)	1.4 (1.1–1.8)	1.4 (1.2–1.8)	1.5 (1.2–1.9)
Q3	1.7 (1.4–2.1)	1.1 (0.87–1.4)	1.4 (1.1–1.7)	1.6 (1.3–1.9)	1.6 (1.3–2.0)
Q4	2.1 (1.7–2.6)	1.2 (1.0–1.6)	1.6 (1.3–2.0)	1.8 (1.5–2.2)	1.9 (1.5–2.3)
Q5 (most)	2.9 (2.4–3.5)	1.0 (0.8–1.2)	1.4 (1.1–1.8)	2.3 (1.9–2.9)	2.4 (2.0–3.0)
Self-rated health					
Excellent	1	1	1	1	1
Very good	1.1 (0.9–1.2)	1.1 (0.9–1.3)	1.1 (0.9–1.2)	1.2 (1.0–1.3)	1.1 (1.0–1.3)
Good	1.2 (1.0–1.4)	1.2 (1.0–1.5)	1.3 (1.1–1.5)	1.4 (1.2–1.6)	1.4 (1.2–1.6)
Fair/poor	1.2 (1.0–1.5)	1.4 (1.1–1.8)	1.4 (1.1–1.7)	1.5 (1.2–1.8)	1.4 (1.2–1.8)
Ethnic-specific combination groups at wave 1					
Sole NZ/European	0.10 (0.08–0.11)	0.09 (0.08–0.09)			
NZ Euro + other gp(s)	5.2 (4.4–6.1)	4.9 (4.1–5.9)			
Non-NZ/European	1	1			
Sole Māori	5.6 (4.7–6.6)		7.7 (6.3–9.3)		
Māori + other gp(s)	27.4 (23.4–32.1)		37.7 (31.5–45.1)		
Non-Māori	1		1		
Sole Pacific	1.4 (1.1–1.9)			0.7 (0.6–1.0)	
Pacific + other gp(s)	23.1 (17.2–31.2)			17.1 (12.6–23.2)	
Non-Pacific	1			1	
Sole Asian	1.33 (1.05–1.68)				0.8 (0.6–1.1)
Asian + other gp(s)	23.0 (14.9–35.4)				17.4 (11.1–27.1)
Non-Asian	1				1

* Total ethnicity (not mutually exclusive).

Notes: Reference = not in that ethnic group. N = 17, 625.

Perhaps the key finding from the multivariate analyses was the persistent and strong association of wave 1 ethnicity with subsequently changing ethnicity. Allowing for the logistic model (i.e. odds ratios), the associations are broadly consistent with the results in Table 2 for simple proportions. For example, identifying with two or more self-identified ethnic groups at wave 1 is a consistently strong predictor of subsequent change in ethnicity.

The model for a Māori-centric categorisation of ethnicity does, however, highlight the fact that sole Māori have a 7.7 greater odds of changing their self-identified ethnicity compared to non-Māori; sole groupings for the other three ethnicities did not have increased odds of changing ethnicity when compared with their counterpart “non” ethnic group.

DISCUSSION

The aims of this paper were to explore and quantify the proportion of people in the SoFIE population who change their self-identified ethnicity over three years and to look at the socio-demographic factors that predict this change. Overall, 8.1% of the SoFIE population changed their level 1 ethnic group over the first three waves. Individuals who changed ethnicity were more likely to be younger, to be born overseas (for Pacific, Asian and Māori changes at least), to live in a family with children, to be in more deprived groups, and to have poorer self-rated health.

However, by far the biggest predictor of changing ethnicity in waves 2 to 3 was one’s ethnicity at wave 1 – especially how many ethnic groups one self-identified with. Over half of all people with two or more ethnic groups at wave 1 had a change at the level 1 ethnic coding over waves 2 to 3. Second, those self-identifying solely as Māori had a 21.3% chance of changing their level 1 ethnic grouping in the subsequent two waves. These baseline ethnic group predictions of subsequent change in ethnic groupings persisted after adjustment for other socio-demographic predictors.

Both census and birth registration data show that over time more people have been identifying with multiple ethnic groups (Callister et al. 2008). Dual or multiple ethnicities are particularly common among Māori and Pacific people and, somewhat connected with this, among young people. A number of New Zealand studies show that allocation of ethnicity to babies and young children is not a straightforward process and is influenced by a range of factors, including intermarriage of parents (Callister 2003, Howard and Didham 2005, Kukutai 2007, 2008). We cannot show whether multiple responses of young or older people stabilise over time. However, we have shown in the current analyses that the proportion of people responding with multiple ethnicity is declining over time, with more people identifying with only one ethnic group. Some reasons for this finding are that respondents are possibly self-prioritising over time, or it could be due to just survey exhaustion. It is our aim, with more years of SoFIE data, to investigate if and how individuals’ responses to self-identified ethnicity stabilise over time and how changing social and economic circumstances influence these.

The strengths of our analysis include the use of repeated measures on the same individuals over time, and (most importantly) the use of the same question, with both interviewer and interviewee blinded to the responses at previous waves. Thus, our results are not driven by questionnaire changes or defaulting to prior recorded ethnicity. Rather, changes must be due to either a “conscious” decision on the part of the respondent or unreliability of measurement. Simpson and Akinwale (2007) have shown that unreliability in measurement may occur due to errors of response, transcription or coding, or simply question ambiguity (Simpson and Akinwale 2007). However, as mentioned previously, stringent survey techniques used in SoFIE aim to control for these errors.

One limitation is possible selection bias. Those SoFIE respondents with data for all three waves represent 83% of the total eligible SoFIE adult population at wave 1. It is plausible

that changing ethnicity varies in magnitude and pattern among non-responders. For example, it was found that rates of attrition were higher in respondents reporting Māori and Pacific ethnicity at wave 1 (Carter et al. 2008). In the SoFIE population only 5% of respondents reported multiple ethnic affiliations, which is much less than was found in the 2001 and 2006 census populations aged 15 years and older (6.5% and 7.8%, respectively). As shown in the results, Māori and Pacific people are more likely to report multiple affiliations, and respondents with multiple affiliations were more likely to change ethnicity over time. This could mean that the current results are potentially underestimating the number of people changing ethnicity due to non-response. These results may not be generalisable to the NZ population, but they are internally valid due to controlled questioning in the survey methods and analysis.

Another key limitation is the limited time of follow-up (three years to date). Extra waves of observation (which are forthcoming) will assist in two ways. First, they will allow a determination of changes over the medium and long term as opposed to just three years. Second, and perhaps more importantly, they will allow some determination of “conscious” changes as opposed to “random” fluctuations. For example, if we observe someone reporting sole Pacific on the first two waves, then Pacific and European on all subsequent waves, this enduring change may be interpreted as a more conscious change than churn over time. With more waves of SoFIE data we will also be able to investigate the influences that changes in social, economic or health circumstances have on changes in self-identified ethnicity over time.

There are many implications of our (and others’) findings. First, changing ethnicity is common. This does not mean it is error-laden change and that ethnicity is a highly context-dependant variable. Nor does it mean that ethnicity is a weaker social variable because of its “volatility”; one only has to look at the stark differences in social and health outcomes by ethnicity in New Zealand to appreciate that, despite being a dynamic construct, it is also an extremely powerful determinant of social inequalities.

Second, it is reasonable to hypothesise that just as people who are sole Māori and sole European at any one point in time have more divergent health status than those from the total Māori and total European groups, so too health status may be even more divergent for those who are constantly sole Māori or sole European. That is, just as people with two or more ethnic groups have mortality rates in between the two (or more) sole groupings, so those with changing ethnicity may demonstrate intermediary health (and social) status.

Third, the finding in the multivariable analyses that neighbourhood deprivation remains a strong predictor of changing ethnicity, but not income or education, is intriguing. It is possible that the NZDep variable may be acting as a partial proxy for living in environments with greater heterogeneity in terms of the ethnicity of one’s neighbours and social contacts.

Fourth, and of direct relevance to health researchers, the finding that a simple measure of self-rated health predicts changing ethnicity over and above other socio-demographic factors is also intriguing – and a little concerning. As social epidemiologists tracking health disparities in New Zealand, we are often asked whether changing ethnic groupings over time may “spuriously” give rise to changing ethnic inequalities over time. Our answer to this challenge had been “probably not”, based on the fact that the 5–10% of people changing ethnic groups between (say) censuses would have to have very different health status from the stable 90–95% of people to greatly distort the overall mortality rate (say) for the group in

question (e.g. Māori or Pacific). This logic still stands, but the results in this paper suggest that those at risk of death (as reflected by poorer self-rated health) may actually be more likely to change ethnic group over time than those not at risk of dying. What does this mean for current health statistics and health priorities?

These results raise questions about the future ethnic composition of New Zealand. For example, are people who self-identify as both Māori and European a distinct group from those who identify as only Māori or only European? Who is the “New Zealander” group? These are contentious, interesting and difficult issues, and not ones that this research alone will answer. But this research will contribute to the discussion by gaining some understanding of the dynamics over time.

Do the results of this paper reflect a true change in affiliation, or a change in response due to the circumstances of the questionnaire, the day of the week, or what happened last weekend? How can we be certain that a person’s ethnic identification today is going to be the same as tomorrow or next year? Irrespective of the exact underlying drivers for each individual change in ethnicity, the current results demonstrate that ethnicity is dynamic, not static. This needs to be understood in any demographic analysis or interpretation of ethnicity data, and may also have an impact on research into ethnic inequalities in health, for example. It provides challenges for measuring long-term trends by ethnicity if the changes we expect or observe are small, and therefore perhaps explained by varying characteristics of those migrating into and out of various ethnic groups. Fluid reporting of ethnicity requires further understanding and analysis, both internationally and in New Zealand. SoFIE data provide a rich source for such analysis in the future.

REFERENCES

- Baldwin, K. (2008) "Nominated ethnicity changes of students from secondary to tertiary education: Secondary to tertiary transitions" *Who Are We: Ethnicity and Identity Seminar*, Statistics New Zealand, Wellington.
- Callister, P. (2003) "Maori/non-Maori ethnic intermarriage" *New Zealand Population Review*, 29(2):89–105.
- Callister, P., R. Didham and A. Kivi (2008) "Who are we?: The conceptualisation and expression of ethnicity" *Official Statistics Research Series*, 4:1–56.
- Callister, P., R. Didham and D. Potter (2005) "Ethnic intermarriage in New Zealand" *Official Statistics Research Series*, 1:1–73.
- Carter, K., M. Hayward and K. Richardson (2008) *SoFIE-Health Baseline Report: Study Design and Associations of Social Factors and Health in Waves 1 to 3: SoFIE-Health Report 2*, University of Otago, Wellington.
- Coope, P. and A. Piesse (2000) *1991–1996 Intercensal Consistency Study*, Statistics New Zealand, Wellington.
- Fenton, S. (1999) *Ethnicity: Racism, Class and Culture*, Basingstoke, Macmillan.
- Guimond, E. (2006) "Ethnic mobility and the demographic growth of Canada’s aboriginal populations from 1986 to 1996" in A. Belanger (ed.) *Report on the Demographic Situation in Canada 1998–1999*, Statistics Canada, Ottawa, Canada.
- Howard, S. and R. Didham (2005) "Ethnic intermarriage and ethnic transference amongst the Maori population" *Official Statistics Research Series*, 1:1–23.
- Jensen, J. (1988) *Income Equivalences and the Estimation of Family Expenditure on Children*, Department of Social Welfare, Wellington.

- Kukutai, T. (2007) "White mothers, brown children: Ethnic identification of Maori–European children in New Zealand" *Journal of Marriage and Family*, 69(5):1150–1161.
- Kukutai, T. (2008) *Ethnic Self-Prioritisation of Dual and Multi-Ethnic Youth in New Zealand: A Discussion Paper*, Statistics New Zealand, Wellington.
- Salmond, C. and P. Crampton (2002) *NZDep2001 Index of Deprivation*, University of Otago, Wellington.
- Simpson, L. and B. Akinwale (2007) "Quantifying stability and change in ethnic group" *Journal of Official Statistics*, 23(2):185–208.
- Statistics New Zealand (2004) *Report of the Review of the Measurement of Ethnicity*, Statistics New Zealand, Wellington.
- Statistics New Zealand (2007) *QuickStats about Culture and Identity: 2006 Census*, Statistics New Zealand, Wellington.

**IN SEARCH OF ETHNIC NEW ZEALANDERS:
NATIONAL NAMING IN THE 2006 CENSUS**

Tahu Kukutai¹
Stanford University

Robert Didham
Institute of Policy Studies
Victoria University of Wellington

Abstract

In the 2006 census the number of people reporting New Zealander as their ethnic group increased five-fold, making it the third most frequent response behind New Zealand European and Māori. The magnitude of the increase was surprising, but followed similar surges in national naming in the Canadian and Australian censuses. In this paper we ask: Who chooses to ethnically identify in the name of the nation and why? In so doing we emphasise the constructed nature of ethnicity and ethnic groups, and the political context within which ethnic identification decisions are made. Our analysis suggests the New Zealander incline was a phenomenon driven primarily by multi-generational New Zealanders who formerly identified as European. We discuss some reasons for why the national identifier appears to have selective appeal as an ethnic label, and reflect on how this may change in coming years.

INTRODUCTION

Users of ethnic and racial data worldwide have long been inured to the vagaries of identity reporting in official statistics. Changes to the census instrument, an increase in multiple-ethnicity reporting and inconsistencies in how individuals identify themselves have made the analysis of ethnicity data in New Zealand increasingly tricky (Callister et al. 2005). Even so, the sharp rise in the number of people recording a New Zealander-type response (e.g. New Zealander, Kiwi) in the 2006 census was surprising. Between 2001 and 2006 the number increased five-fold to nearly 430,000, making New Zealander the third most frequent ethnic group response behind New Zealand European and Māori. As Table 1 shows, prior to 2006 the number of people rejecting the listed tick-boxes in favour of a write-in New Zealander response had never exceeded 90,000. In the absence of obvious demographic (e.g. growth through migration and fertility) and operational (e.g. changes to the questionnaire) factors, the vast majority of the increase in New Zealander responses can be attributed to individuals changing their ethnic identification.²

¹ An earlier version of this paper was presented at the Conference on Social Statistics and Ethnic Diversity in Montreal in December 2007. We would like to thank David Pearson and Eric Guimond for their insightful comments on the conference paper, as well as two anonymous reviewers for this journal. Any omissions or errors of fact are ours alone. All correspondence can be directed to Tahu Kukutai at tkukutai@tahatu.co.nz

² Based on historical patterns, the expected number of New Zealander responses in 2006 was about 135,000, which was 300,000 lower than the actual number recorded. People recording a New Zealander response in 2006 were predominantly people in New Zealand at the time of the 2001 census. The proportion of non-response to the ethnicity question in 2006 (4.2%) was comparable with 2001 (4.0%).

Table 1 New Zealander Responses¹ to Census Ethnic Group Question, 1986–2006 censuses

Census year	N	% of total population ²	% change
1986	20,313	0.6	–
1991	20,800	0.6	2.4
1996	58,600	1.7	181.7
2001	85,300	2.4	45.6
2006	429,429	11.1	403.4

¹ Respondents who reported a New Zealander-type response (e.g. “New Zealander”, “Kiwi”) alone, or in combination with some other ethnic group (e.g. “New Zealander” and “New Zealand European”).

² Population specifying their ethnicity (N = 3,860,163).

Most public debates about New Zealander ethnic identification in the census have focused on whether it should be recognised as a bona fide ethnic group in official statistics, with the key criticism being that New Zealander is a national rather than ethnic identifier (Callister 2004, Johnston 2007, Misa 2006, Middleton 2006). Rather than adjudicate over whether New Zealander is a nationality or ethnic group, we ask for whom such a designation resonates and why? Our exploration is timely. With the next census just two years away, Statistics New Zealand has recently embarked on a review of the ethnicity classification standard, and has flagged New Zealander ethnic identification as a priority issue.

We begin with a select review of the literature, focusing on the constructed nature of ethnic groups and the dynamics of national naming in the censuses of other settler states, notably Canada. Using census data, we describe the key characteristics of those giving a New Zealander ethnic identification and consider the qualitative literature for insights on what such a designation may mean. Our interest is in what national naming in the census may signify with respect to ethnic inter-group relations, rather than the psychological meanings individuals assign to such labels. We conclude with some reflections on what New Zealander ethnic identification may mean for future relations.

THE SOCIAL CONSTRUCTION OF ETHNIC GROUPS AND CATEGORIES

Within the social sciences, ethnic groups are generally conceived of as social constructions. Ethnicity and ethnic groups are neither primordial nor static, but are created and sustained through inter-group processes that involve competitive as well as intimate relations. To state that ethnicity is socially constructed does not deny its importance in the lives of individuals, nor does it deny the ubiquity of ethnic and racial inequality and divisions (Rallu et al. 2006). Rather, it draws attention to the subjective ways in which cultural markers are imbued with social significance and used to construct ethnic boundaries that delineate “us” from “them” (Barth 1969).

The national census is a key forum in which ethnic boundaries are rendered visible or invisible by the state. Ethnic groups are constituted in the census by grouping people on the basis of their identification decisions, usually made in response to a pre-specified set of options. Though such data may be presented to the public as objective reflections of the nation’s social reality, there are at least three ways in which ethnic data are political. First, the purpose for which ethnic data are collected invariably has a political dimension. Ethnic data have been used at various times and places to justify and sustain systems of ethnic inequality (e.g. apartheid in South Africa), although these days it is more common for ethnic data to be seen as integral to efforts to ameliorate discrimination (Morning and Sabbagh 2005). In the

settler states of Australasia and North America, data collected on the basis of ethnicity are used in multiple ways for policy and political purposes. In New Zealand this includes measuring equity of access to services such as health and education, and monitoring outcomes for particular ethnic groups and communities (Callister 2007).

Second, categories with which people identify may be the product of political processes. An explicit example of identity politics is lobbying to get a category listed on the census questionnaire. In the U.S., Mexican-American groups successfully lobbied for the inclusion of a separate Hispanic Origin category in the 1980 census, while Asian interest groups pushed for the inclusion of specific race categories in the 1980 and 1990 censuses (Nobles 2000). A more subtle form of political action is the strategic use of “identity frames” by social movements (Snow and Benford 1992) that heighten the appeal of an ethnic category, often in a way that resonates with a particular constituency. The motivation may be to maximise the counts associated with an established category in the pursuit of resources, or to push for the legitimisation of a category not yet recognised by the state.

Third, the process of statistically constituting ethnic groups is political in terms of consequences. As Kertzer and Arel note, “Censuses do more than reflect social realities, they also participate in the social construction of these realities” (2002:2). The constitutive aspect of “nominating groups into existence” extends beyond listing names on a census form to include the post-censal aggregation of categories for public dissemination. In New Zealand, the categories “Asian” and “Pacific peoples / Pasifika” exemplify how statistical categories are imbued with ethnic meaning, but are also selectively and strategically employed by those so categorised to denote a political community.

In recent decades the counting of ethnic groups in the New Zealand census has undergone dramatic change (see Statistics New Zealand 1993, 2004). The biggest change has been a shift from a system that required people to report their race or ethnic origins in fractions (e.g. “3/4 Māori and 1/4 European”), to one based on self-identification with an ethnic group or groups. The *Statistical Standard for Ethnicity* defines an ethnic group as people who have some or all of the following characteristics:

- a common proper name
- one or more elements of common culture, which need not be specified, but may include religion, customs or language
- a unique community of interests, feelings and actions
- a shared sense of common origins or ancestry
- a common geographic origin (Didham 2005).

Ethnicity is defined as the “group or groups that people *identify with or feel* they belong to” (italics added). The emphasis on self-identified ethnicity sits somewhat uneasily alongside the substantive notion of an ethnic group as a community of shared descent and cultural practice. It also raises an interesting sociological question germane to our investigation: Is self-identification with an ethnic category sufficient for the category to be considered a group?

Posing the question “are ethnic groups real?”, Fenton (2003) argues that what makes a collective of individuals a “group” is as important as defining what makes a group “ethnic”. In his view, the important distinction between ethnic groups and categories is too often fudged. To illustrate, people who recorded “Pakistani” on the British census form might be described in official statistics as the Pakistani ethnic group. However, whether in fact such

people constitute a corporate group or community, versus a “diffuse” identity category, is a matter of sociopolitical investigation rather than census definition.

Although the politics of ethnic counting and classification has usually been seen as the domain of minorities (Doane 1997, Kertzer and Arel 2002), there are signs this is changing. In Australia and Canada, patterns of national naming in the census have focused attention on the construction and mobilisation of majority group identities. In those countries Canadian and Australian have become, respectively, the most commonly reported ethnic origins and ancestry groups in the census (Lee and Edmonston 2007, Australian Bureau of Statistics 2007, Kunz and Costello 2003). In Australia, ethnic self-identification in the name of the nation has been largely confined to people who previously recorded English ancestry. In Canada, the pattern has been more complex, divided between the nation’s two charter groups: Anglophones and Francophones (Boyd 1999, Lee and Edmonston 2007). In seeking to understand the emergence of national naming in the New Zealand census, the experiences of other settler societies offer some useful insights. Given space constraints, we focus our comparison on Canada.

NATIONAL NAMING IN THE SETTLER STATES

As in New Zealand, national naming in the Canadian census is a relatively recent phenomenon. In the 1986 census just 0.5% of the Canadian population recorded their ethnic origins as Canadian, very similar to the proportion recording New Zealander ethnicity in the 1986 New Zealand census.³ In 1991 the share increased to 4%, prompting some commentators to ponder whether Canadian was an “evolving indigenous category” (Pryor et al. 1992). According to Boyd (1999), several structural changes occurred during the 1980s that heightened the appeal of affirming Canadian ethnic origins, including an increase in levels of migration, a shift in the source countries of migrants, and the increasingly conservative political climate. The catalyst, however, seemed to be a “Count-me-Canadian” campaign run by the *Toronto Sun* newspaper in the lead-up to the 1991 census, urging readers to state “Canadian” on their census forms. Analysis of “Canadian” responses suggested the campaign resonated most with a distinct segment of the Canadian population: people with a multi-generational presence in Canada residing in areas settled by British origin groups.

Following the increased reporting of Canadian ethnic origins, Canadian was listed as the fifth example response to the 1996 ethnic origin question in the English-language questionnaire, and Canadiene on the French version. Subsequently, the share reporting Canadian ethnic origins increased dramatically, from 4% in 1991 to 31% of the population in 1996. Given the regional selectivity of national naming in 1991, analysts were surprised to find Canadiene was the most popular ethnic origin choice (47%) in the Francophone province of Quebec. The finding was all the more surprising in light of historical demands for the recognition of Quebec sovereignty and a 1995 referendum on separation that had narrowly failed. Boyd argued that the pattern of national naming rested on the different “symbolic representation” of the terms Canadian and Canadiene. The former invoked location within the borders of the Canadian nation; the latter was a historical expression used by Francophones to denote their foundation status and distinguish them from Anglo politics, language and institutions.

³ Prior to 1981 the ethnic origin question in the Canadian census was specifically asked in relation to paternal ancestors and, from 1986 to 2001, in relation to ancestors generally (Statistics Canada 2002). The New Zealand census help notes specifically state that the ethnic group question concerns cultural identification, not ancestry. Response patterns to the Māori ancestry and ethnic group questions suggest that recognition of Māori descent is a determinant of Māori ethnic self-identification, but not vice versa (Kukutai 2004).

Irrespective of the potentially different meanings, the Canadian/Canadiene identifier surpassed British as the most frequent ethnic origin response in 1996. As a result, Canadian appeared as the first-listed example question in the 2001 census. Canadian ethnic origin responses peaked at 37% of the population, before dropping to 32% in 2006 (see Lee and Edmonston 2007 for a detailed analysis of 1991-2001 data). The Canadian experience underscores a point germane to our argument: ethnic identification in the census is not merely a matter of individual psychological processes, but is tied to the structure of group relations. The emergence of Canadian as the nation's largest ethnic origin response also points to the ways in which question design has the potential to dramatically influence ethnic identification patterns.⁴

Like the 1991 Canadian census, the 2006 New Zealand census was preceded by heightened public debate around the ethnicity question. Prior to the 2006 census, Statistics New Zealand decided to discontinue the practice of coding New Zealander-type responses into the New Zealand European category and code them as a separate category – a decision that was picked up by primetime news (TVNZ 2006).⁵ In the month preceding the census a widely circulated “Declare your pride” email campaign encouraged people to state their ethnicity as New Zealander. The email rejected the division of people into sub-categories and voiced objections to being “treated as foreigners in our own country” (Middleton 2006). It stated that many people had been in New Zealand long enough to be able to claim New Zealander as “who we are”, regardless of ancestral origins or skin colour. The campaign lacked the institutional support of the Canadian campaign, but was given a significant, if varied, hearing through the mainstream media. At the same time, National party politician Gerry Brownlee added his voice to the debate, claiming officials were “perpetuating the myth that we are a country that is ethnically divided” (cited in Middleton 2006).

Similar to the “Count me Canadian” campaign, the “Declare your pride” campaign seemed to be a catalyst for the surge in New Zealander identification in the 2006 census. However, the reasons why the call was answered so readily by some also points to structural changes occurring throughout the 1990s and the years immediately preceding the census. In an earlier paper we argued three changes were especially influential in drawing sharper distinctions between Māori, immigrants and New Zealanders of European descent during that period (Kukutai and Didham 2007; see also Pearson 2000, 2002). They were:

- Māori identity politics and Treaty settlements, as well as their reactions – the latter included challenges to historical settlements and so-called “race-based” funding (Brash 2004)

⁴ In the Australian context, Kunz and Costello (2003) describe the potential effects of form design and question sequencing on ancestry responses. In 2001 a number of ancestry tick-boxes, including Australian and English, were listed on the census form. In that census the number of people recording Australian ancestry surpassed English for the first time. The questionnaire design also appeared to influence the ancestry responses within the Aboriginal / Torres Strait Islander population. Of those who responded to the ancestry question on the standard census form, a mere 7% recorded Aboriginal ancestry, compared to 67% recording Australian ancestry. Aboriginal origin peoples living in indigenous, usually remote, areas completed a different census form, which did not include an Australian tick-box. Among those people, 99% recorded Aboriginal ancestry.

⁵ The decision to separately code New Zealander responses was one of the recommendations in the 2004 Review of the Measurement of Ethnicity, which received more than 120 submissions (Statistics New Zealand 2004). From 1991 through to 2001 New Zealander-type responses were coded as European at level 1 of the ethnic classification and New Zealand European at level 4, the most detailed listing. In 2006, New Zealander responses were coded as a separately named category at level 4 of the classification, and included with the Other ethnic grouping at level 1 (Statistics New Zealand 2005).

- rising immigration from “non-traditional” source countries, particularly those within Asia
- the shift to a more permissive system of ethnic self-identification in official statistics.

These factors, and the experiences of Canada and Australia, suggest national naming in the New Zealand census is more likely to resonate with multi-generational New Zealanders of European descent than with indigenous Māori or recent immigrants. To empirically examine this proposition, we undertake descriptive analysis using aggregate census data. Though we are unable to link responses across censuses, we can extrapolate from findings based on the recent censuses to make some informed interpretations.

DATA ANALYSIS

We begin our analysis by comparing the distribution of ethnic group responses for the 2001 and 2006 censuses. To do so we employ level 1 coded data, which collapses more detailed ethnic responses into six ethnic categories: Māori, European, Asian, Pacific, MELAA (Middle Eastern / Latin American / African) and Other. The vast majority of those in the focal European category identified as New Zealand European.

Table 2 Level 1 Ethnic Categories, 2001 and 2006 Census

Level 1 category	2001 ¹	2006 ¹	% change
European	2,871,429 ² (2,786,129)	2,609,589	-9.2 (-6.3)
Māori	565,281	565,329	+7.4
Pacific peoples	231,801	265,974	+14.4
Asian	238,176	354,552	+49.3
MELAA	24,084	34,743	+44.3
Other	802	430,881 ³	-

1 Based on total responses, which includes all responses given for each ethnic category (e.g. a Māori and European response is counted in both categories).

2 Includes the 85,300 New Zealander responses.

3 Includes the 429,429 New Zealander responses.

Table 2 shows an obvious relative *and* absolute decline in the European grouping, providing support for the view that New Zealander ethnic identification was largely a European phenomenon. This view is hardly novel or contentious. Until the 2006 census, it was implied by the official practice of allocating New Zealander responses to the level 1 European category, rather than to Other. For inter-censal comparisons to be valid, however, the change in coding practices needs to be taken into account. If we assume the number of people who reported a combined New Zealander–European response in 2001 was negligible, and simply subtract the 85,300 New Zealander responses from the 2001 European category, we see a more modest, but still significant, decrease of 6.3% (figure in parentheses). By contrast, all of the other level 1 categories increased between 2001 and 2006, suggesting non-European groupings were not greatly affected by the large increase in New Zealander responses.

Additional insights into the characteristics of those recording a New Zealander response may be gained by considering more detailed level 4 ethnicity data. Table 3 shows the number and percentage constituted by the 10 most popular New Zealander responses.

Overall, there was a relatively low proportion of hyphenated New Zealander responses, with just 12.9% of New Zealander responses recorded as part of a complex ethnic identification. Though this was slightly higher than the level of multiple-ethnic reporting in the total population (10.4%), it was far below levels observed in Canada. There, about 40% of

Canadian responses in the 1996 and 2001 censuses were reported in conjunction with other ethnic origin groups (Lee and Edmonston 2007). Of the combination New Zealander responses, New Zealand European was by far the most commonly recorded group – almost five times larger than the next biggest combination. In addition, more people reported a multiple-ethnic affiliation of New Zealander, European and Māori than simply New Zealander and Māori. Comparatively few people recorded New Zealander in combination with an Asian or Pacific ethnic group.

Table 3 Top 10 New Zealander Responses, Level 4, 2006 Census

New Zealander responses¹	N	% of New Zealander	% of total population²
New Zealander only	374,061	87.1	9.7
New Zealander / NZ European	27,897	6.5	0.7
New Zealander / NZ European / Māori	5,685	1.3	0.1
New Zealander / Māori	5,613	1.3	0.1
New Zealander / Chinese	1,500	0.3	0.0
New Zealander / Indian	897	0.2	0.0
New Zealander / Samoan	879	0.2	0.0
New Zealander / Dutch	654	0.2	0.0
New Zealander / English	609	0.1	0.0
New Zealander / Cook Island Māori	465	0.1	0.0
Total New Zealander	429,429	99.1	10.6

¹ Level 4 ethnic group responses with New Zealander

² Population indicating their ethnicity (N = 3,860,163).

The limited appeal of New Zealander as an ethnic option for Māori⁶ is confirmed by considering the pattern of New Zealander responses by Māori ancestry. Table 4 shows 18.1% of the total population responding to the ethnic group question in the 2006 census, also recorded Māori ancestry. The proportion of New Zealander respondents recording Māori ancestry was significantly lower at 10.7%. Though we do not show tables for Europeans, we note this was very close to the proportion of Europeans recording Māori ancestry (11.8%). Age structure can be dismissed as an explanation because the proportion of New Zealanders with Māori ancestry, relative to the total population, was lower at every age group. This comparison suggests Māori were not strongly represented among New Zealander responses. We note, however, that only 28% of those who recorded a New Zealander response and acknowledged Māori descent did so in combination with Māori ethnicity.⁷ This is much lower than the proportion in the overall Māori descent population that recorded Māori as part

⁶ This does not mean Māori lack an attachment to New Zealander as a non-ethnic identity; e.g. national identity. When forced to choose between New Zealander and Māori identity, several surveys have shown that a significant number of Māori choose the former. In wave 1 (1995–1997) of Te Hoe Nuku Roa, the longitudinal study of Māori households, respondents were asked “If you had to choose one of these options that best describes you, which would you choose?”. The majority (51%) selected “a Māori”, but a sizeable share (25%), opted for “a New Zealander” or “a Kiwi” (Te Hoe Nuku Roa Research Team 1999). Similarly, a 2008 Marae Digipoll survey of 400 in the Māori electorate of Hauraki–Waikato asked respondents to self-prioritise an identity. The question asked: “Do you think of yourself as...”, with response options including “Māori first” (70.6%), “New Zealander first” (17.2%), “Both” (11.9%), and “Don’t know” (0.2%) (see TVNZ 2008). The non-specific nature of the identity question in both surveys means we do not know on what basis people responded. In both cases, respondents were defined as Māori by descent rather than ethnic affiliation.

⁷ In the 2006 census, 41,819 people who recorded a New Zealander response also recorded Māori descent. Of those, only 11,854 also reported Māori ethnicity.

of a dual or multiple ethnic group response. It is likely that some people who identified as Māori in 2001 changed their ethnic identification to New Zealander in 2006, but the extent of the loss cannot be reliably ascertained here.

Table 4 Māori Ancestry by Age Group, New Zealander Responses and Total Population, 2006 Census

<u>Age group (years)</u>	<u>% of New Zealander</u>	<u>% of total population</u>
0–4	17.5	30.4
5–9	18.1	29.3
10–14	17.0	27.7
15–19	14.6	24.8
20–24	13.2	20.4
25–29	13.1	20.1
30–34	12.0	18.4
35–39	11.1	16.5
40–44	10.2	15.3
45–49	8.4	14.0
50–54	7.2	12.6
55–59	6.2	10.7
60–64	5.1	9.5
65–69	5.2	9.2
70–74	4.7	7.6
75–79	4.0	5.4
80–84	3.4	3.9
85+	2.1	3.4
<u>All ages combined</u>	<u>10.7</u>	<u>18.1</u>

One of the most striking aspects of the New Zealander responses shown in Table 5 is the predominance of the New Zealand-born. A massive 94% of those identifying as New Zealander were born in New Zealand, compared with just 77% of the total population. Among the 24,000 or so overseas-born people who identified as New Zealander, more than half were born in the United Kingdom. Very few were born in Asian countries, though both regions were equally represented in the total population. Geographic differences in the claiming of New Zealander identity is likely to reflect, in part, the different migration histories of groups, with the vast majority of overseas-born New Zealanders having lived in New Zealand for 20 years or more (see Allan 2007).

Clearly, nativity is a fundamental – almost universal – element of New Zealander ethnic identification, but does this extend to multi-generational ties? One way to assess the influence of generational attachment is to consider the representation of the first generation (individuals born overseas), second generation (New Zealand-born individuals with one or two immigrant parents), and third generation (New Zealand-born persons with parents who were also New Zealand-born) among New Zealander responses. Because a question on parental birthplace is not asked in the census, we limit the following analysis to “children” (in the familial role, rather than life-cycle sense) who were living in the same household as their parents in the 2006 census, and for whom country of birth was recorded.⁸

⁸ There is a strong age bias in this approach because most children in families are young people. There may also be bias because of our choice to restrict this comparison to two-parent families, when a significant proportion of families in New Zealand have one co-residing parent.

Table 5 Geographic Region of Birth, New Zealander Responses and Total Population, 2006 Census

Geographic region of birth	New Zealander		Total population	
	N	%	N	%
New Zealand	401,142	94.4	2,960,217	77.1
United Kingdom	11,004	2.6	251,688	6.6
Europe	2,097	0.5	68,067	1.8
Pacific	4,386	1.0	198,594	3.5
Asia ¹	2,475	0.6	251,130	6.5
Other	3,915	0.9	110,064	2.2
Total ²	425,022	100.0	3,839,760	100.00

1 Includes South-East, North-East, and Southern and Central Asia.

2 Limited to those who specified country of birth.

Table 6 shows that of the 82,845 children recorded as New Zealander, 78% were born in New Zealand to New Zealand-born parents. This was significantly higher than their representation in the total population. As expected, very few of the children recorded as New Zealander were foreign-born children of foreign-born parents. Taken together, Tables 5 and 6 suggest ethnic identification as a New Zealander is heavily influenced by nativity and generational ties.

Table 6 Migrant Generation for Children in Two-Parent Families, New Zealander Responses and Total Population, 2006 Census

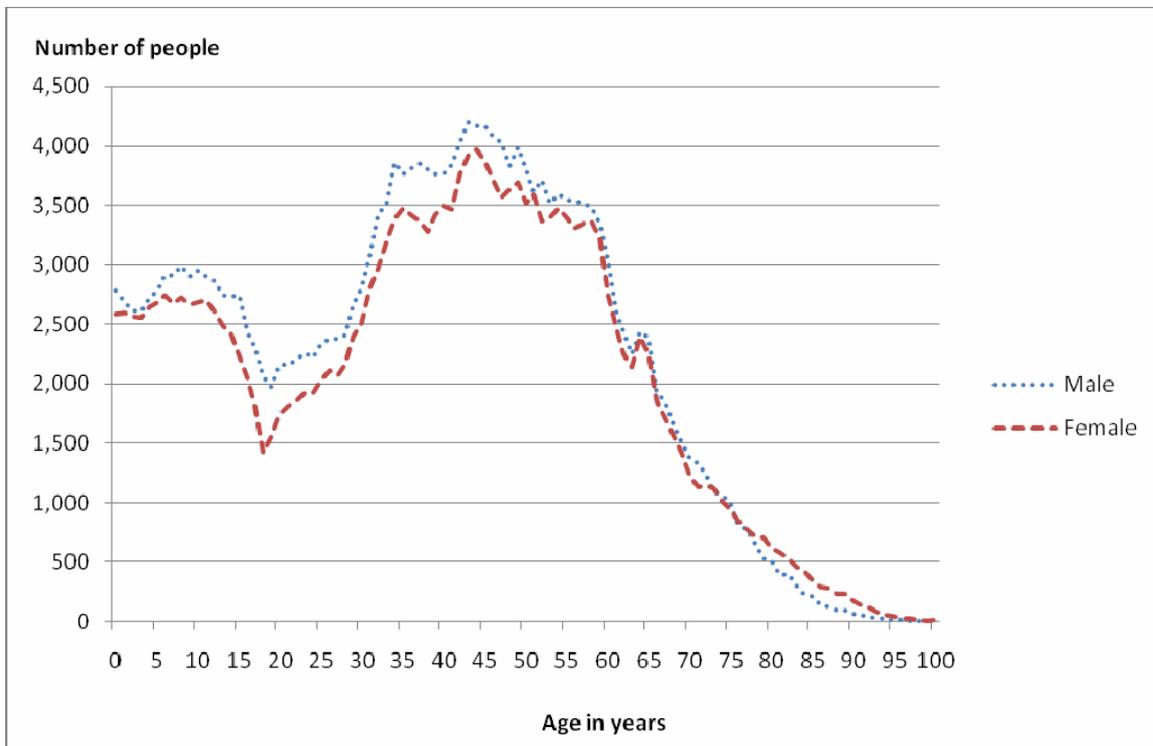
	New Zealander		Total population	
	N	%	N	%
<i>1st generation</i>				
Child and parents born overseas	888	1.1	96,336	12.3
<i>2nd generation</i>				
Child born in NZ, both parents born overseas	3,321	4.0	87,195	11.1
Child born in NZ, one parent born in NZ	13,863	16.7	118,395	15.1
<i>3rd generation</i>				
Child born in NZ, both parents NZ born	64,773	78.2	481,494	61.5
Total*	82,845	100.0	783,420	100.0

* Only includes families where country of birth was recorded for child and both parents.

Finally, examination of the age-sex structure and regional distribution of New Zealander responses provides additional evidence of the selective nature of national naming (see Figures 1 and 2). The figures show New Zealander ethnic identification was especially marked among middle-aged men residing in the South Island. The number of New Zealander-identified males exceeded females at nearly every age, particularly in the middle ages of the lifespan. This is significant given the excess of women relative to men at these ages in the total population. Regions noted for their European dominance, notably the West Coast, Southland and Marlborough, also had a higher proportion of their populations responding as New Zealanders, in part reflecting the higher median age in those areas. These demographic features suggest the appeal of New Zealander ethnic identification does not have generic

appeal for all Europeans, but is more likely to resonate with older people living in areas that are overwhelmingly European in composition.

Figure 1 Age Structure of New Zealander Responses, by single year of age, 2006 census

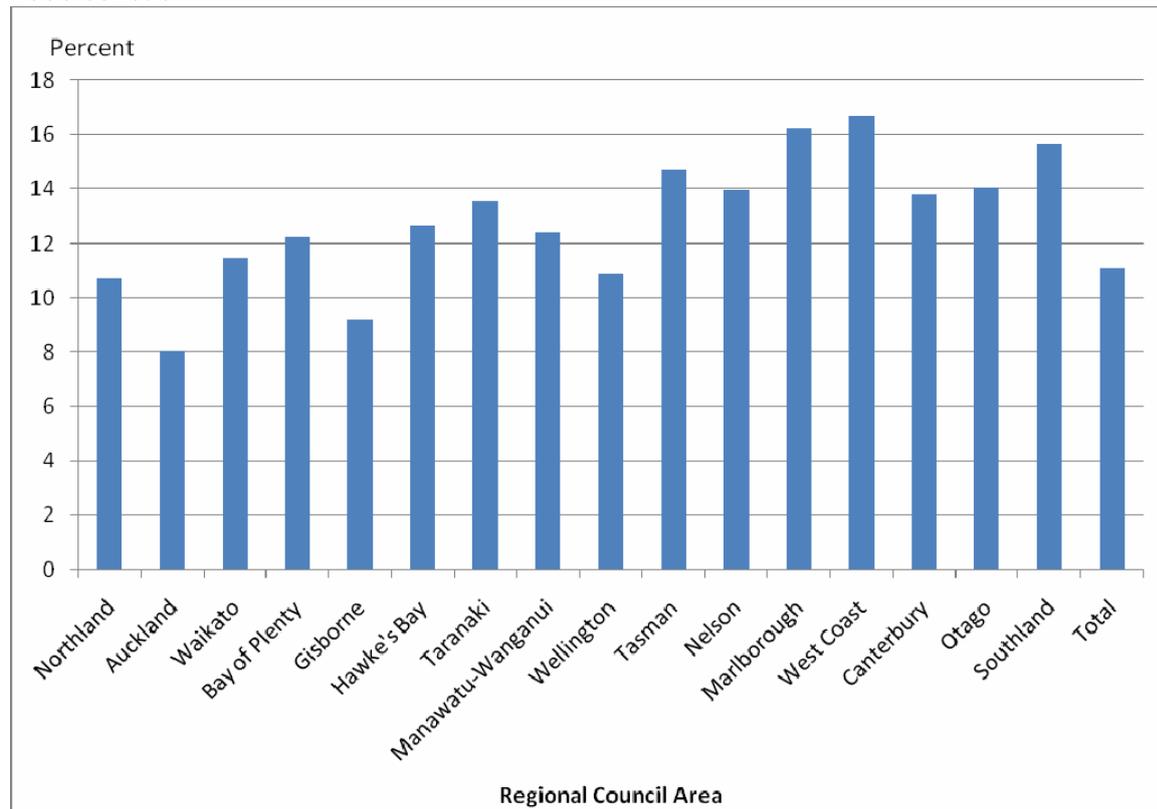


Source: Statistics New Zealand 2007, Figure 4.

Taken together, our findings suggest people who formerly identified with a European ethnicity were the dominant force behind the rise in New Zealander responses. We acknowledge, however, that probabilistic matching across censuses is desirable to more accurately assess the flows, including the potential contribution of people formerly recording Māori or Pacific ethnicities.⁹ The patterns observed in our analysis raise a second and more difficult question: Why does national naming resonate with some groups and not others? These questions cannot be answered by census data, but require analysis of a qualitative sort. It is to this we now turn.

⁹ Studies of shifts in ethnic identification (Coope and Piesse 1997) have shown significant inflows and outflows across the boundaries of the Māori and Pacific ethnic groups. Our analysis is unable to account for these sorts of flows; for example, an outflow of Māori to New Zealander may have been masked by an inflow to Māori from other groups.

Figure 2 Proportion of Region's Population Recording a New Zealander Response, 2006 census



Source: Statistics New Zealand 2007, Figure 11

THE DYNAMICS OF NEW ZEALANDER ETHNIC IDENTIFICATION

Rejection of Ethnicity

In seeking to account for the European dominance of national naming, one potential interpretation of New Zealander identification is that it signals the rejection of ethnic labelling. Bonilla-Silva (2003) has argued that colourblindness – or the denial that ethnicity or race matters – is an ideology used by many members of the dominant group to counter the perceived threat posed by ethnic pluralism and minority group rights. In New Zealand, the refrain “we are all New Zealanders” was historically deployed at various times to deny Māori claims to distinctiveness, while glossing over persistent racial inequality and the institutional dominance of British culture (Pearson 1990). In 2006, a colourblind construction of New Zealander ethnicity might manifest as a response to the twin threats of Māori politicisation and growing ethnic diversification through rising Asian immigration. The reference to ethnic divisions in the New Zealander email campaign would appear to be consistent with the rejection of ethnic distinctions.

A slightly different interpretation is that the resistance to ethnic self-ascription reflects a more passive tendency for members of majority groups to see themselves as being without ethnicity or race. In the United States context, Doane (1997) has argued the low visibility and salience of the dominant White identity lies in the group's dominant status. Because dominant groups have the power to influence national institutions (e.g. schools, laws, the media), their preferences and standards come to be seen as natural or objective, rather than

tied to a particular group. As a result, the distinction between national identity and ethnic identity tends to be less marked.

Similar observations have been made in New Zealand in relation to White New Zealanders of European descent (Bell 1996, Liu 2005, Wetherell and Potter 1992). Survey research undertaken by Liu found that 15 to 35% of people he referred to as “Pakeha/New Zealand Europeans” refused to report an ethnic label, referring to themselves as New Zealanders or “just kiwis”. Noting the absence of similar claims among Māori, Pacific or Asian New Zealanders in his samples, Liu concluded it was “only the majority group that seeks the prerogative and has the power to go ethnically unmarked” (2005:78). In the context of national naming patterns, the distinction between ethnic self-identification (i.e. what I say I am) and ethnic ascription (i.e. what others say I am) is not trivial. Processes of ascription play an important role in how individuals experience ethnic labels and the privileges or disadvantages that attach to them. There is an abundance of research showing that “ethnic options” are greater for some groups than for others, with more flexibility tending to be associated with greater political and social status (Waters 1990).

Ethnicity Reconfigured

Rather than signal the rejection of ethnicity, New Zealander ethnic identification may denote a process of ethnic reconfiguration or formation. Pearson (2000, 2002) has written persuasively about how British-descent New Zealanders have had to renegotiate their identity within a complex of changing relations that includes the distancing of ties with England. He argues that for much of New Zealand’s colonial past, settler élites and most of the Anglo masses were “comfortable with a transnational civic and ethnic identity, as imperial and local British” (2002:1004). In many legal and political contexts, the distinction between New Zealand-born people of British descent and British immigrants was minor.¹⁰ However, weakening economic and political attachments to Britain, coupled with Māori politicisation and intensified immigration, spawned a search for a new identity and legitimating myths. Pearson suggests the renegotiation of settler identity has primarily involved a reassessment of relations with two “intimate others” – “Britons past (and present) and Māori” (2000:104).

Over the last two decades multiple frames have been provided for the renegotiation of dominant group identity. One is through discourses that have framed multi-generational New Zealanders of European, but mostly British, descent as the nation’s second indigenous peoples. Initially this re-imagining of indigeneity was invoked in relation to Pākehā identity. During the height of Māori political activism the term Pākehā was self-consciously used as “the basis for a nationalist project seeking a bicultural or bi-national accommodation with Māori” (Pearson 2002:1005). Pākehā, thus conceived, represented what Moran (2002) calls “indigenizing settler nationalism”, according indigenous peoples and their claims a central position in national identity.

The clearest articulation of Pākehā indigeneity can be found in the work of the late historian Michael King (1985, 1999). According to King, Pākehā indigeneity has emerged out of a multi-generational presence in New Zealand, an emotional attachment to the land, and values and culture that are *distinctly* New Zealand (italics added). King’s formulation of a second indigenous people has had several detractors, with the key concern being that it minimises the

¹⁰ Women who were British subjects and married a so-called “race alien” (i.e. non- Māori, non-European) were exceptions to this general rule and automatically lost their British status (Census and Statistics Office 1925:111, Didham 2009).

legacy of colonialism and seems to appropriate Māori claims to indigeneity (see, for example, Bell 2004). The notion of majority group indigeneity continues to have considerable popular and political appeal but is more likely to be expressed in the nomenclature of New Zealander than Pākehā, for reasons noted below.

The Default Ethnic Option

A third perspective is that New Zealander ethnic identification represents the default ethnic option. Research and public opinion have shown a lack of consensus among members of the majority group about the most appropriate label for their group (see, for example, Liu 2005, Statistics New Zealand 1993, 2004). This is not a new phenomenon: the problem of defining the ethnicity of the majority group was flagged as an issue for ethnic classification and statistics as part of a review undertaken in 1993 (Statistics New Zealand 1993). Given discontent with the terms Pākehā, European and New Zealand European, New Zealander might simply be seen as the most appropriate and comfortable option. But why did labels that were once seen as acceptable in colloquial usage become unacceptable or inappropriate statistical categories? The historical and statistical record is replete with examples of Pākehā and European used as descriptors of self and other.¹¹ However, from the late 1980s the meaning of Pākehā seems to have changed, in part due to its usage in political discourses setting out Māori grievances. Interestingly, Pākehā as a social category is still popular among Māori, with Liu's research showing Māori-identified New Zealanders prefer the label Pākehā for New Zealanders of European descent much more than those so labelled.

Like Pākehā, the New Zealand European identifier has also been subject to criticism, not because of negative connotations but because it lacks a meaningful point of reference (King 1999, Statistics New Zealand 2004). As a statistical term, New Zealand European first appeared in the 1991 census, then as NZ European *or* Pākehā in the 1996 census, reverting to NZ European in 2001. Despite European being the only ethnic group in official statistics to be preceded by the New Zealand identifier, critics have argued that it is too generic to serve as a meaningful ethnic label, and/or is irrelevant for those with only distant ties to the European continent. For now, many more people continue to check the New Zealand European tick-box than write in a New Zealander response, which suggests the former label resonates on some level. However, the Canadian and Australian experiences suggest this may change if a New Zealander tick-box is introduced in future.

CONCLUSION

In the settler states of North America and Australasia, census-based enquiries into ethnicity are an integral tool of policy makers. As the flagship of official statistics in many countries, the census is also a site of inclusion and exclusion, where ethnicity and ethnic groups are constructed, reconfigured or rendered invisible (Kertzer and Arel 2002). As such, the emergence of national naming in the censuses of Australia, Canada and New Zealand offers intriguing insights into the socially constructed bases of ethnicity and ethnic groups, and the ways in which shifting group relations at the macro-level are implicated in shifting identification patterns at the individual level. How individuals choose to identify themselves on a census form may seem a deeply personal or perhaps a relatively inconsequential matter,

¹¹ The term European was widely used as a racial descriptor for individuals who were neither Māori nor "race alien" in the Census from 1874 through to the 1980s. Pākehā was largely absent from official statistics but was often used and understood in workaday and public life as a neutral descriptor for White New Zealanders. See, for example, its usage in the National Party's election campaign (McIntyre and Gardner 1971:412).

depending on how the form filler sees the exercise. However, Bell (1996) reminds us that naming is never “innocent”. Rather, she argues, “what is at stake here is more than personal preferences for this term or that, but significant discursive struggles that both represent and constitute part of wider political struggles being waged in our society on the basis of claims of cultural identity.”

By combining the theoretical literature with qualitative insights from Canada and New Zealand we have sought to bring sociological perspectives to bear on the questions: For whom does the New Zealander ethnic designation resonate, and why? In so doing we have emphasised the importance of the political context within which identification decisions are made. As in Canada, the trend towards national naming in New Zealand appears to be linked to processes that have drawn sharper distinctions between indigenes, immigrants and settlers. To that end, national naming seems to resonate most among people with multi-generational ties to New Zealand but who are not of Māori descent, and who live in areas where Europeans predominate. We note, however, that for the majority of self-identified New Zealanders, it is unlikely at this time that processes of attribution would lead them to be designated New Zealander by others. More likely, European or Pākehā would be the signifier that springs to mind because the term New Zealander is not yet (and might never be) bedded into the vernacular as an ethnic descriptor of white New Zealanders. We have suggested that national naming by majority group members may signal a rejection of ethnicity, its configuration in the form of dominant group indigeneity, a default ethnic option, a combination of these elements, or some other trend. The answer cannot be discerned from census data, but hopefully future research using more qualitative methods will provide illumination.

One of the key substantive concerns to emerge from our analysis is the selectivity of New Zealander ethnic identification. In Canada there have been ongoing debates about whether or not ethnic data should be collected and the potential for national naming in the census to be a force for social division or cohesion (Howard-Hassman 1999, Jedwab 2003). In theory, if not in practice, national identity (as distinct from legal citizenship) is an affiliation that everyone within the nation can lay claim to, irrespective of symbolic or concrete ties to communities of difference. Moreover, an ethnic group derives its meaning vis-à-vis other groups, which necessitates boundary making, even if those boundaries are porous and changeable. If the meaning of New Zealander evolves to become an ethnic dimension of difference, particularly one that is predominantly claimed by New Zealanders of European descent, where does that leave those who do not lay claim to New Zealander ethnicity? Do they become the outsiders? Should we be concerned about that prospect? If the New Zealand census follows the path of Australia and Canada, the prospect of a New Zealander tick-box in future is not improbable. The statistical and substantive implications of such a move are manifold, but are unfortunately beyond the scope of this paper.

Finally, although we have emphasised the selective nature of national naming, it may be that some, or even many, of the people who identify as New Zealander conceive of their affiliation in inclusive terms. Because processes of ethnic labelling and classification are inherently political, the meanings associated with such categories are unlikely to remain stable or uncontested. The New Zealander signifier, once used by colonists as a synonym for Māori, but now apparently in transition to denote homegrown New Zealanders of European/British origins, exemplifies this process. However, patterns of New Zealander identification, and their meanings, may yet expand to include more diverse ancestries. Only

the passage of time and generational distance will tell if a more inclusive rendering will emerge.

REFERENCES

- Allan, J. (2007) *Profile of New Zealander Responses, Ethnic Question: 2006 Census*, Statistics New Zealand, www.stats.govt.nz/NR/rdonlyres/EA0F8124-619C-47B3-ADB7-CBB28F44AE85/0/ProfileofNewZealanderCensus2006.pdf [accessed 15/10/07]
- Australian Bureau of Statistics (2007) *2006 Census of Population and Housing Fact Sheet: Ancestry*, Australian Bureau of Statistics, www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/2914.0Main%20Features235002006?opendocument&tabname=Summary&prodno=2914.0&issue=2006&num=&view= [accessed 1/10/07].
- Barth, F. (1969) *Ethnic Groups and Boundaries*, Little Brown, Boston, MA.
- Bell, A. (1996) “We’re just New Zealanders” in P. Spoonley, D. Pearson and C. Macpherson (eds.) *Nga Patai: Racism and Ethnic Relations in Aotearoa / New Zealand* (pp. 144–158), Dunmore Press, Palmerston North.
- Bell, A. (2004) “‘Half-castes’ and ‘White Natives’: The politics of Māori–Pākehā hybrid identities” in C. Bell and S. Matthewman (eds.) *Cultural Spaces in Aotearoa New Zealand: Identity, Space and Place* (pp. 121–137), Oxford University Press, Auckland.
- Bonilla-Silva, E. (2003) *Racism without Racists: Color-blind Racism and the Persistence of Racial Inequality in the United States*, Rowman and Littlefield, Boulder, CO.
- Boyd, M. (1999) “Canadian eh? Ethnic origin shifts in the Canadian census” *Canadian Ethnic Studies*, 31(3):1–19.
- Brash, D. (2004) Nationhood Address presented to the Orewa Rotary Club of New Zealand, 27 January 2004, <http://national.org.nz/article.aspx?articleid=1614> [accessed 15/10/2007].
- Callister, P. (2004) “Seeking an ethnic identity: Is New Zealander a valid ethnic category?” *New Zealand Population Review*, 30:5–22.
- Callister, P. (2007) *Special Measures to Reduce Ethnic Disadvantage*, Institute of Policy Studies, Victoria University of Wellington, Wellington.
- Callister, P., R. Didham, D. Potter and T. Blakely (2007) “Measuring ethnicity in New Zealand: Developing tools for health outcomes analysis” *Ethnicity & Health*, 12(4):1–22.
- Census and Statistics Office (1925) *Census 1921: General Report*, Census and Statistics Office, Wellington.
- Coope, P. and A. Piesse (1997) *1991–1996 Inter-censal Consistency Study*, revised unpublished paper, Statistics New Zealand, Wellington.
- Didham, R. (2005) *Understanding and Working with Ethnicity Data: A Technical Paper*, Statistics New Zealand, Wellington.
- Didham, R. (2009) “Encounters and intersections” in M. Ip (ed.) *The Dragon and the Taniwha*, Auckland University Press, Auckland.
- Doane, A. (1997) “Dominant group ethnic identity in the United States: The role of ‘hidden’ ethnicity in intergroup relations” *Sociological Quarterly*, 38(3):375–397.
- Fenton, S. (2003) *Ethnicity*, Polity Press, Cambridge.
- Howard-Hassman, R. (1999) “Canadian as an ethnic category: Implications for multiculturalism and national unity” *Canadian Public Policy*, 35(4):523–535.
- Jedwab, J. (2003) “Coming to our census: The need for continued inquiry into Canadians’ Ethnic Origins” *Canadian Ethnic Studies*, 35(1):33–50.
- Johnston, M. (2007) “Census planners blasted for ‘distorted’ ethnicity statistics” *New Zealand Herald*, 21 April.
- Kertzer, D. and D. Arel (2002) “Censuses, identity formation, and the struggle for political

- power” in D. Kertzer and D. Arel (eds.) *Census and Identity: The Politics of Race, Ethnicity, and Language in National Censuses*, Cambridge University Press, Cambridge, UK.
- King, M. (1985) *Being Pakeha: An Encounter with New Zealand and the Maori Renaissance*, Hodder & Stoughton, Auckland.
- King, M. (1999) *Being Pakeha Now: Reflections of a White Native*, Penguin, Auckland.
- Kukutai, T. (2004) “The problem of defining an ethnic group for public policy: Who is Māori and why does it matter?” *Social Policy Journal of New Zealand*, 23:86–108.
- Kukutai, T. and R. Didham (2007) “Can national identity become ethnic identity? The case of the emerging ‘New Zealander’ ethnic group” paper presented at the Conference on Social Statistics & Ethnic Diversity, 6–8 December, Montreal, Canada.
- Kunz, C. and L. Costello (2003) *2001 Census: Ancestry – Detailed Paper* (census paper No. 03/01b), Australian Bureau of Statistics, Canberra.
- Lee, S. and B. Edmonston (2007) “Who chooses ‘Canadian’ ethnicity and why” paper presented at the annual meeting of the Canadian Population Society, Saskatoon.
- Liu, J. (2005) “History and identity”: A system of checks and balances for Aotearoa/New Zealand” in J. Liu, T. McCreanor, T. McIntosh and T. Teaiwa (eds.) *New Zealand Identities: Departures and Destinations* (pp. 69–87), Victoria University Press, Wellington.
- McIntyre, W. and W. Gardner (eds.) (1971) *Speeches and Documents on New Zealand History*, Clarendon Press, Oxford.
- Middleton, J. (2006) “Email urges ‘New Zealander’ for census” *New Zealand Herald*, 1 March.
- Misa, T. (2006) “Ethnic census status tells the whole truth” *New Zealand Herald*, 8 March.
- Moran, A. (2002) “As Australia decolonizes: Indigenizing settler nationalism and the challenges of settler/indigenous relations” *Ethnic and Racial Studies*, 25(6):1013–1042.
- Morning, A. and D. Sabbagh (2005) “From sword to ploughshare: Using race for discrimination and anti-discrimination in the United States” *International Social Science Journal*, 57(183):57–73.
- Nobles, M. (2000) *Shades of Citizenship: Race and the Census in Modern Politics*, Stanford University Press, Stanford, California.
- Pearson, D. (2000) “The ties that unwind: Civic and ethnic imaginings in New Zealand” *Nations and Nationalism*, 6(1):91–110.
- Pearson, D. (2002) “Theorizing citizenship in British settler societies” *Ethnic and Racial Studies*, 25(6):989–1012.
- Pearson, D. (1990) *A Dream Deferred: The Origins of Ethnic Conflict in New Zealand*. Allen & Unwin with Port Nicholson Press, Wellington.
- Pryor, E., G. Goldmann, M. Sheridan and P. White (1992) “Measuring ethnicity: Is ‘Canadian’ an evolving indigenous category?” *Ethnic and Racial Studies*, 15(2):214–235.
- Rallu, J., V. Piché and P. Simon (2006) “Demography and ethnicity: An ambiguous relationship” in G. Caselli, J. Vallin and G. Wunsch (eds.) *Démographie: Analyse et Synthèse* (pp. 481–515), Institut National d’Etudes Démographiques, Paris.
- Snow, D. and R. Benford (1992) “Master frames and cycles of protest” in A. Morris and C. Mueller (eds.) *Frontiers in Social Movement Theory* (pp. 133–155), Yale University Press, New Haven.
- Statistics Canada (2002) *Census Dictionary. Population Universe: Ethnic Origin*, Statistics Canada, Ottawa,
www12.statcan.ca/english/census01/Products/Reference/dict/pop040.htm
- Statistics New Zealand (1993) *NZ Standard Classification of Ethnicity 1993*, Statistics New Zealand, Wellington.

- Statistics New Zealand (2004) *Report of the Review of the Measurement of Ethnicity*, Statistics New Zealand, Wellington.
- Te Hoe Nuku Roa Research Team (1999) *Maori profiles research project. Te Hoe Nuku Roa source document: Baseline history*, Massey University, Palmerston North.
- TVNZ (2006) "Census stirs up ethnicity debate" *One News*, 10 February.
- TVNZ (2008) "Marae-Digipoll survey Hauraki-Waikato electorate" Media release, 3 August.
- Waters, M. (1990) *Ethnic Options: Choosing Identities in America*, University of California Press, Berkeley, CA.
- Wetherell, M. and J. Potter (1992) *Mapping the Language of Racism: Discourse and the Legitimation of Exploitation*, Columbia University Press, NY.

WHO ARE WE?: THE HUMAN GENOME PROJECT, RACE AND ETHNICITY

Paul Callister¹
Associate Professor
Institute of Policy Studies
Victoria University of Wellington

Robert Didham
Institute of Policy Studies
Victoria University of Wellington

Abstract

Race and ethnicity continue to be evolving concepts. They are influenced by genetic research but are also shaped by discussion and debate that takes place far from laboratories. Their meanings also evolve somewhat differently in local contexts. One of the newer influences on these concepts are the findings from the ongoing Human Genome Project. This project, as well as other genetic research, is already playing a part in the ongoing evolution of ideas of who we are, both individually and collectively. However, a range of factors, including the significant intermixing of people across various boundaries, suggest that personal definitions of identity are likely to become more important than “scientific” definitions imposed by external authorities.

INTRODUCTION

In 2008 Statistics New Zealand commissioned a literature review based on the broad question “Who are we?” (Callister et al. 2009). Topics explored in this review included ethnogenesis; the official construction of ethnicity in New Zealand; ethnic intermarriage, and related to this the transmission of ethnicity to children and multiple ethnicity; ethnic mobility; indigeneity; the recent growth of “New Zealander” responses in the New Zealand census; and genetics, the Human Genome project, race and ethnicity.

Ethnic mobility, the New Zealander response and one aspect of indigeneity – being part of an iwi (tribe) – are explored in some depth in this *Social Policy Journal* collection. Some issues of intermarriage, multiple ethnicity and social policy have already been explored in this journal (Callister 2004, Keddell 2007). In this paper we have chosen to expand on the outcomes of the literature review in just one area: the Human Genome Project, race and ethnicity. We have chosen this topic for a number of reasons.

First, although New Zealand official statistics have shifted to a self-defined and, in theory, culturally constructed, definition of ethnicity, it is possible that clearly bounded “racial groups” remain in the minds of many New Zealanders, especially when categorising people other than themselves.² Certainly the term “race” is still used at times in public debates; for

¹ **Acknowledgements**

This research was funded through the Official Statistics Research fund. We would like to thank the referees for their insightful comments. A full “Who are we?” paper is available on the Statistics New Zealand website.

² In New Zealand we have little idea of how New Zealanders, including a range of “experts” across various scientific disciplines think about issues such as genetics, race and ethnicity, including whether ethnicity is culturally constructed or is based on biology. In contrast, in the U.S. research has been carried out on this issue (e.g. Morning 2007).

example, regarding “race-based” social policies, there is a Race Relations Commissioner in the Human Rights Commission, and the Human Rights Commission supports a “Race Relations Day” each year (Callister 2007). Second, particularly in the U.S. there is an important public policy-related debate about whether “race” is a useful variable in both health research and in medicine. In addition, although New Zealand policy research focuses on the ethnicity variable, in areas such as ethnicity-based scholarships or law and medical school quotas, ancestry rather than ethnicity is generally the way to determine eligibility (Callister 2007). Generally, ancestry is based on biological links.³ Another reason is that, particularly in the U.S. context, genetic testing has become part of genealogy research. Finally, of the six current official level 1 groupings of ethnicity in New Zealand, the four that are used mainly in public policy analysis (i.e. European, Māori, Pacific peoples, and, in more recent times, Asian) have some links back to current continental-based “racial” groups which have limited historical validity. Although we are not directly focusing on issues of indigeneity in this paper, these issues are inevitably confronted when studying human genetics, as will be shown.

In this paper we initially contextualise the debates with a brief history of New Zealand migration. Then, under the broad heading of the Human Genome Project, race and ethnicity, we consider a number of issues. First, we briefly discuss some early “scientific” systems of classifying groups, then move on to current debates about classification. In this discussion we talk about cultural versus biological construction of race or ethnicity. We realise there are various meanings given to the term “cultural construction”, but in this context we align with the view that official ethnic categories are being created through social processes, with historical, political and economic forces shaping the naming of groups. The alternative – but not mutually exclusive – view is that ethnic groups form naturally around people with shared characteristics and that these are then recognised in official data collections. We then explore recent discussion about genes, ethnicity and health in New Zealand. This is followed by a section on genes and popular science, particularly new and cheap methods of DNA testing that allow us to determine some ancestry. We then consider wider issues of genetics and where we come from. This leads on to some final comments on a topic for which, due to the advances always being made in scientific understanding, it is very difficult to draw clear conclusions.

THE HISTORICAL CONTEXT OF NEW ZEALAND

The migration history of New Zealand influences local thinking about race, ethnicity and genetics. New Zealand has experienced a number of waves of migration. The first was by settlers from islands around the Marquesas and Cook Islands, starting perhaps about 1,000 years ago, who became New Zealand’s indigenous population, the Māori. The first recorded European visit to New Zealand was by Abel Tasman in 1642. Over 100 years later James Cook arrived in 1769 from Britain. In contrast to Tasman, Cook and his crew had numerous contacts with Māori (Salmond 1991). From the earliest days of contact there has been a high level of intermarriage, both formal and informal, between Māori and the new arrivals (Pool 1991, Belich 1996).

When Cook arrived the ethnic composition was, by current definition, 100% Māori. Due to a number of factors, including exposure to introduced diseases such as measles, to which Māori

³ In New Zealand it is mainly ethnicity that is collected in official surveys, but Māori ancestry is also collected in the census. In contrast, in Australia it is ancestry that is collected in official surveys such as the census (Hamer 2009).

had no natural resistance – a genetic influence – and land dispossession, it has been estimated that the Māori population subsequently halved by the late 1880s from its pre-contact population (Sorrenson 1956, King 2003). In the period of Māori population decline the settler population was rapidly increasing, from fewer than a thousand to half a million between 1831 and 1881 (Belich 1996: 278). Around the turn of the 20th century the Māori population began to increase again.

After World War II there was significant migration from the Pacific, with this population growing rapidly during the late 1960s and early 1970s. The fourth major group, classified as Asians, pre-dates recent Pacific migration. There have been people of Asian origins and ethnicities living in New Zealand from the early days of European settlement, although in very small numbers. Many of the “Europeans” were of course also of Asian origin, having moved on from countries such as India and Malaya. However, a century later in the 1980s and 1990s the number of people from Asia grew rapidly. A more recent component of migration comprises refugees and other settlers from Africa and the Middle East.

Although migration has long been important in New Zealand, strong migration flows in recent decades mean New Zealand, with just under a fifth of its population born overseas, is at the high end of industrialised countries in terms of the proportion of foreign-born residents. In addition, a similar proportion of the New Zealand-born population, including Māori, does not live in New Zealand (Hamer 2007).

THE HUMAN GENOME PROJECT, RACE AND ETHNICITY

The last great battle over racism will be fought not over access to a lunch counter, or a hotel room, or the right to vote, or even the right to occupy the White House: It will be fought in the laboratory, in a test tube, under a microscope, in our genome, on the battlefield of our DNA. (Henry Louis Gates Jr, cited in Anthony 2008:36)

Since the early 20th century, a variety of scientists, educators, and public officials have trusted that growing knowledge of human biology would correct erroneous – and pernicious – ideas about race. (Morning 2008:106)

In February 2001 the Human Genome Project, a U.S. federal government effort, together with Celera Genomics, a private company, successfully completed drafts of the entire human genome (genome 5). This project, and what has so far flowed from it, has created a new set of debates about possible links between genetics and human behaviour, particularly health outcomes. As part of this there has been much discussion in U.S. academic journals about whether the Human Genome Project supports concepts of race or undermines them. These writings can be found in the biological science journals (for example, there was a *Nature Genetics* supplement in November 2004⁴) as well as in the area of social sciences (for example, the *American Psychologist* devoted its January 2005 edition to a discussion of “genes, race, and psychology in the genome era”). In 2008 a special edition of the *American Journal of Sociology* comprised a series of papers discussing how sociological thinking intersects with new advances coming out of genetic research. There has long been some tension between the “culturally constructed” view of identity favoured by most sociologists and that of “biologically determined” identity formation. These types of collections indicate that researchers are actively exploring these tensions. Writing in this sociological collection, Morning (2008:S108) argues that the type of research being undertaken in human genetics

⁴ *Nature Genetics*, 36(11), <http://www.nature.com/ng/journal/v36/n11s/index.html>.

has recently shifted many people's assumptions about race "from a model based on phenotype to one grounded in genotype".

However, as Morning (2008) notes, the Human Genome Project is only one of a long line of scientific "advances" in thinking about race and ethnicity. Based on a survey of American textbooks, she argues that in the U.S. science has been continually used, and often misused, not only to rework concepts of race but also to preserve the idea of race and associated concepts of social stratification.⁵

Early Classification Systems

While having no awareness of genetics in this modern sense, early classifications of "race" tried to draw links between physical characteristics and behaviour. Perhaps not surprisingly, those doing the categorising have generally placed themselves at the top of perceived hierarchies. For example, according to Lee et al. (2001), 18th century botanist Carolus Linnaeus suggested the existence of four groups in his 1758 work.⁶ These were: Americanus, Asiaticus, Africanus and Europeaeus. As an example of beliefs about linking physical characteristics with behaviours, he classified the North American group as "Americanus rubescus (American red), with characteristics of being "reddish, obstinate, and regulated by custom". These early classifications were based on an idea that there were some clearly definable racial groups and that these groups could be linked to the main continents.

According to Lee et al., the Linnaean classification was based on an amalgam of physical features and behavioural traits that reflected the social attitudes and political relations of the times. The authors go on to suggest that the resulting ideology of race was used to explain, predict and control social behaviour. Moreover, the concept of immutable, biologically based human races suited the process of colonialism, providing a scientific justification for economic exploitation and practices such as slavery. While having a major long-term impact on thinking about human classification systems, Malik (2008:81) suggests that the Linnaean system, when initially developed, was not without its critics, especially the Comte de Buffon and Johann Friedrich Blumenbach.⁷ In particular, Buffon believed that neither species nor races could be easily distinguished from each other. He argued that instead there was continuity between groups, with no distinct boundaries and much within-group diversity. This debate about boundaries continues today in discussions of race, ethnicity and genetics.

⁵ This has, in turn, spawned a raft of new vocabulary, with several neologisms appearing within the bibliome (itself an example) as the interconnections between genetics and epigenetics, on the one hand, and behaviour, on the other, get fleshed out in proteomics, glycomics and various other omics. This new set of fields in the neurobiological arena is in its infancy, but there are indications, especially in the work of Eric Kandel (2007, 2008) and Reinhard Stöger (2007, 2008), that there may be something to learn here with reference to the relationship between neurobiology and the individual's expression of ethnicity, and possibly even with respect to ethnogenesis. The precise link between neurobiology, epigenetics and genetics remains largely unresolved. However, there is overwhelming evidence of the role of social contexts in shaping ethnic self-identity, whatever its neurological basis, and, equally importantly, the role of outsiders' views of ethnic groups in the formation of stereotypes leading to stigmatisation and discrimination.

⁶ According to Malik (2008:80), Linnaeus never referred to these groups as "races".

⁷ Malik (2008:82) notes that it was Blumenbach who introduced the term "Caucasian", an expression that continues to be used in some contexts (e.g. in New Zealand, Shaw 2008).

Current Debates about Classification: Genes Versus Culture

In common with other countries, race was the basis of most early New Zealand statistical collections. Although the term “race” continues to be used in official data collections in countries like the U.S., social scientists such as Stephan and Stephan (2000) suggest that race is now more properly viewed as a social rather than a biological construct, even if biology still plays a role in the phenotypic expression of some physical characteristics.⁸ As an example of the thinking of one group of social scientists, Templeton noted in 1998 (p. 632):

Genetic surveys and the analyses of DNA haplotype trees show that human “races” are not distinct lineages, and that this is not due to recent admixture; human “races” are not and never were “pure.” Instead, human evolution has been and is characterized by many locally differentiated populations coexisting at any given time, but with sufficient genetic contact to make all of humanity a single lineage sharing a common evolutionary fate.

The negation of any scientific foundation to classifying people on the basis of race has been promoted in the mainstream media by a group of biological scientists. However, there remains much debate about the genetic basis of race among the wider scientific community (Graves 2001, Morning 2007). In these debates, potentially race-related differences are being analysed on at least four levels: societal, individual, cellular and subcellular. The debates also take place at both the official level and via personal beliefs as to whether race is socially constructed or “biologically anchored” (Morning 2007:436). There are three broad positions. One is that race has no biological basis. Morning (2008) cites the finding that human beings share 99.9% of their DNA as a mainstream argument for undermining racial categories. Another argument she cites is that around 85% of human genetic variation occurs *within* the boundaries of what are commonly labelled as racial groups, as opposed to *between* them. Morning (2007) labels those who reject the biological determinism of race as “constructionists”. They suggest that both historical and contemporary social processes shape thinking about race.

The second broad position is that there are “racial” differences, but that these are primarily cosmetic. They include superficial characteristics such as skin and hair colour features that involve a very small number of genes that were selected historically in particular environments.⁹ However, it is argued that these superficial differences do not reflect any additional genetic distinctiveness. This view is similar to that held by the group Morning (2007) calls “anti-essentialists”.¹⁰ In addition, mixing of genes through intermarriage often blurs these characteristics. But in a U.S. context, Morning (2008: s126) argues that such blurring of visible characteristics does not necessarily undermine concepts of race:

Geneticization makes racial sense of the new demographic landscape by relaxing the old phenotypic assumption that racial difference is visible difference. Even if we can no longer classify the widening range of physical types around us with ease, the genetic definition of race assures us that underneath the skin, racial types can be detected. This decoupling of race from surface phenotype preserves its viability as a taxonomic system in a nation that is

⁸ Phenotype is defined in a popular on-line dictionary as “the appearance of an organism resulting from the interaction of the genotype and the environment”, <http://dictionary.reference.com/browse/phenotype>.

⁹ Graves (2001) estimates that perhaps out of the 30,000 to 40,000 genes individuals have, only six genes determine skin colour. However, while skin colour differences might be seen as cosmetic, they may matter in a number of outcomes, including racial discrimination (Callister 2008).

¹⁰ Anti-essentialists draw on biological studies to refute ideas of race. In contrast, the essentialists argue that biological research does support the concept of distinct races.

becoming ever more diverse. In a multiracial America, genetic race is perhaps the most plausible kind of scientific race.

The third broad view is that genes and race remain an important link, particularly in health (for an example of this type of debate, see Graves 2001, Kaufman and Cooper, 2002, Satel 2000, Schwartz 2001). The idea is that particular sets of genes are more common in particular racial groups and these genes alter the propensity of groups to be at risk from certain types of illness. Such a concept raises questions as to whether medical treatment should vary on the basis of ethnicity/race. In this context, Malik notes that particular drugs have already been developed that appear to be more effective for particular “racial” groups, but that there are potential costs and benefits of such approaches which require further research and debate.¹¹

Some Debates about Genes, Ethnicity and Health in New Zealand

At a popular level, mixing of genes has been seen as a way of providing disease resistance. O'Regan (2001:135) notes that early in the colonisation of New Zealand, “Kāi Tahu leaders were quick to recognise the increased resistance to European illnesses in those of mixed descent.” In addition, genetic influences can sometimes be assumed on the basis of unknowns. In much New Zealand research, but particularly within health research, it has been found that the usual variables that make up a measure of socio-economic status can explain about half of the differences in outcomes between Māori and Europeans (Blakely et al. 2007). Rather than treating the other half as an unknown, media commentators, and indeed sometimes biomedical experts, often assume the other half must be due to genetic influences.^{12 13}

In New Zealand and the wider Pacific, examples can also be found of medical research that considers race/ethnicity to be a critical variable, with some hint that underlying genetics may be important. These include studies of body size and health problems in Polynesians (Swinburn et al. 1999), and in Tongans and Australians (Craig et al. 2001). Other research in this field points to an accurate record of ancestry being important when considering health risk factors (Grandinetti et al. 1999).

Skin cancer is one example where genetic determination of skin colour is important (Callister 2008).¹⁴ Shaw, in 1988 and again in 2008 (Shaw et al.), notes that malignant melanoma is uncommon among Māori and, using language that has racial undertones, shows that it is primarily a disease of “Caucasians”.¹⁵ Taylor (2002) discusses the lower incidence of skin cancer among certain darker-skinned individuals compared with fair-skinned persons. However, Taylor also argues that genetic factors are not the only ones causing differences in skin disorders, suggesting that cultural practices can also have a significant impact.

¹¹ Graves (2001) suggests there are major dangers in practising “race”-based medicine. If doctors focus on risk factors that are associated with particular groups, they may overlook far more important risk factors such as family background, lifestyle and the living environment.

¹² In 2006 there was much discussion in the media about Māori having a “warrior” gene; for example, see tvnz.co.nz/view/page/425826/810285.

¹³ Some New Zealand studies suggest a major part of the unexplained influences is due to institutional racism (Harris et al. 2006).

¹⁴ In parallel, in New Zealand in 2008 a debate occurred over whether there is a strong causal, but inverse, relationship between sun exposure, vitamin D production and cancer. Part of the debate involved questioning the relationship between ethnicity and skin colour (Callister 2008).

¹⁵ This may be changing given that in parallel to the “browning” of New Zealand there is a “whitening” of Māori and Pacific people.

Other New Zealand health researchers have suggested that “genetics plays only a small part in ethnic differences in health, and other factors are often more amenable to change” (Pearce et al. 2004:1070). In their review article, Pearce et al. note one study on alcoholism and genes, which showed a particular gene that is believed to protect against alcoholism is relatively common among Māori but not found in Europeans. Yet, indicating the problem of linking ethnicity to disease via genes, they note that alcoholism is actually more common among Māori. The researchers go on to suggest that an “overemphasis on genetic explanations may divert attention and resources from other more important influences on health” (p. 1071).

In New Zealand, debates around “raced-based” medicine take a different form to those seen in the U.S. The focus is not on drugs that may benefit particular ethnic groups, but on issues of who should undertake research into areas such as Pacific and Māori health and, underpinning this, concepts of specific Māori or Pacific knowledge. There is also much discussion about the potential benefits of health practitioners, particularly doctors and nurses, affiliating with the same ethnic group(s) as their patients. The idea is that the perceptions of both the patient and the health-care provider – perhaps based on cultural practices, but possibly also recognisable characteristics of both parties – may influence various aspects of health-care delivery and outcomes. This has led to concepts such as “by Māori, for Māori” health services. These types of issues have been canvassed in this journal (e.g. Henwood 2007, Jones et al. 2006, Edwards et al. 2005), in health-related journals (Wilson 2008), as well as elsewhere (e.g. Durie 1998, Callister 2007).

Of particular relevance to any discussion about genes, ethnicity and health is the relationship between genetics and environmentally induced changes in biological outcomes. It has been shown that some diseases that had previously been cited as evidence of particular genetic propensities are more clearly linked to factors such as life style and diet, as has been shown in various recent studies (Wang 2008, Rush 2008). This is a position taken by many overseas researchers as well (e.g. Nazroo 2003, Lee et al. 2001). Lee et al. note (p.37):

...the application of a naive genetic determinism will not only reinforce the idea that discrete human races exist, but will divert attention from the complex environmental, behavioral, and social factors contributing to an excess burden of illness among certain segments of the diverse U.S. population.

A further line of thought suggests that while the concept of “races” based on continents of origin is flawed, it may be useful for scientists to develop their own genetically based classification system, especially in relation to health. For example, Condit (2005: no page numbers) suggests:

If it is unsound to refer to genetic clusters as races, one might turn instead to the underlying scientific basis of the clusters themselves to begin to formulate an appropriate classification strategy. Instead of referring to genetic clusters as “races”, one might reasonably refer to them as LDGPs (Large Diffuse Geographically-based Populations). Instead of using the inaccurate labels of “Asian” and “African” and “Caucasian” to describe specific clusters, one might derive distinctive, technical labels that more accurately capture the geography involved. As a first pass, one might identify LDGP-EAS for the East Asian cluster, LDGP-EM for the European/Mediterranean cluster, LDGP-SWA for the cluster located in southern and western Africa, LDGP-API for the cluster deriving from Australia and the Pacific Islands, and LDGP-AM for the populations indigenous to the two American continents.

However, Condit acknowledges that such a classification remains problematic because the LDGPs do not correspond systematically with medically relevant alleles.¹⁶ Malik (2008) also discusses such approaches in relation to health, and notes that systems of classifications have involved a range of variables including blood type and certain combinations of genes. Some techniques have involved clustering people into predetermined groups or allowing computer programs to create their own clusters. However, in the latter situation, generally the number of acceptable clusters is predetermined.

Further complicating the thinking about genes and health, environmental factors such as stress and diet can have biological consequences that are transmitted to offspring without a single change to a gene. This requires a major rethink of some aspects of evolutionary genetics and heredity, and is now regarded as an important aspect of disease and disorder transmission. This is especially so in the study of cancers and mental disorders that may be transmitted along family lines with no discernible genetic cause. These epigenetic effects have been noted above as a potential element in ethnogenesis. At one level, the human genome explains most of the phenotypical differences between people. But a number of non-physical attributes may also require explanation by other mechanisms such as epigenetic effects and social environmental contexts, though caution is required in ascribing causes to these factors when there may be many as yet unknown and equally shadowy interacting factors at play.¹⁷

Genes and Pop Science

Discussions about genetics and race are now taking place at two broad levels. One is via the scientific research that has been briefly touched upon above. The other is the popular discussion, often taking place via websites such as Wikipedia and discussion forums such as YahooGroups. But the two overlap in various ways. Selective scientific discoveries are reported in the popular discussions, sometimes with exaggerated claims, while scientists make attempts to communicate some of the scientific knowledge from time to time with the public. For example the American Anthropological Association has an interactive website that discusses aspects of the Human Genome Project as well as issues such as skin colour, history and genetics.¹⁸

One of the areas with potentially exaggerated claims that has captured public attention is DNA testing. On one level DNA testing for ancestry has allowed people to take ancestry beyond what parents or perhaps grandparents “choose to tell us” or actually know for certain themselves. But U.S. commercial companies, primarily tracking African ancestry, are now making statements such as:

Find your roots on your mother's side over 500 years ago! The MatriClan Test traces maternal ancestry by analyzing the mitochondrial DNA (mtDNA) women and men inherit exclusively from their mothers. Find your roots on your father's side over 500 years ago! The PatriClan Test traces paternal ancestry by analyzing the Y-chromosome men inherit exclusively from their fathers. Since only men carry a Y-chromosome, women CANNOT take

16 The Encyclopaedia Britannica online defines an allele as any one of two or more genes that may occur alternatively at a given site on a chromosome. Alleles may occur in pairs, or there may be multiple alleles affecting the expression of a particular trait.

17 We should bear in mind, though, that the words of Charles Darwin in *The Expressions of the Emotions in Man and Animals* in 1872 (p. 66) remain as true of neuroscience today: “our present subject is very obscure and it is always advisable to perceive clearly our ignorance”.

18 <http://www.understandingrace.org/home.html>.

the PatriClan Test. But luckily, women may trace their paternal lineage by having a male relative with their father's last name take the test for them.¹⁹

Such companies claim that they find African ancestry for a significant number of the paternal lineages they test, stating also, "If our tests indicate that you are not of African descent, we will identify your continent of origin".²⁰

Malik (2008:63) suggests this new use of genetics for tracking ancestry changes some aspects of "who we are". Commenting specifically on Black identity, which he sees as in recent decades being primarily a cultural or political expression, he now argues that it is increasingly being seen as a genetic heritage, "inextricably linking race, culture and belonging".

But scientists are now issuing warnings about such tests, suggesting that "inexpensive genetic testing that purportedly traces a person's ancestry to historical figures such as Mongolian warlord [sic] Genghis Khan is more titillating than medically relevant."²¹ In particular, there is concern about the use of such tests to determine susceptibility to particular illnesses. The American Society of Human Genetics notes that mitochondrial DNA tests trace the mother's lineage and Y-chromosome tests track paternal ancestry, while ancestry informative marker (AIM) or single nucleotide polymorphism (SNP) tests examine non-sex chromosomes inherited from both parents. They go on to note that all these tests exclude a significant part of a person's genetic heritage. Maternal and paternal tests only trace one bloodline, leaving out many ancestors. As an illustration, the society noted that if one went back 10 generations, each test tells a person about only one of 1,024 ancestors.

The society also noted that SNP testing could be problematic because gene variants influenced by natural selection may be found among several populations around the world, and thus produce false leads. As an example, they noted that if an SNP is associated with malarial resistance, it may be common in populations exposed to malaria even if they do not share recent ancestry. Such discussions about the potential costs and benefits of genetic tests are likely to become more intense as parts of the scientific community move towards producing low-cost genetic mapping for individuals ("Babies to be genetically mapped – expert" 2009).

Genetics and Where We Come From

But genetic testing is not just being carried out for individuals who choose to do this for themselves. There are large projects that are endeavouring to analyse collections of DNA. One is the Genographic Project, a five-year research partnership led by the National Geographic Society and IBM who are using genetic and computational technologies to analyse historical patterns in DNA from participants around the world to better understand genetic roots. The three stated aims of the project are: to gather field research data in collaboration with indigenous and traditional peoples around the world; to invite the general public to join the project by purchasing a Genographic Project Public Participation Kit; and to use proceeds from Genographic Public Participation Kit sales to further field research and the Genographic Legacy Fund, which in turn supports indigenous conservation and revitalisation projects.

¹⁹ <http://www.africanancestry.com/index.html> [accessed 21/1/09].

²⁰ <http://www.africanancestry.com/matrici clan.html> [accessed 21/1/09].

²¹ <http://www.medpagetoday.com/Genetics/GeneticTesting/11800> [accessed 17/11/08].

Not surprisingly, such projects are not universally supported. For example, it was reported in the New Zealand media that spokespeople from indigenous groups, including Māori and aboriginal people in Australia, objected to the research.²² One of them was Paul Reynolds, a postdoctoral fellow at the Auckland University-based National Centre of Research Excellence for Māori Development, Ngā Pae o te Māramatanga, who stated:

We've been here before. We've had centuries of exploitation by non-indigenous people. This is highly political. It's race-based research, and therefore it can be manipulated and used for political benefit. This could link straight into what Don Brash wants to hear, that everybody comes from the same place, that we are all common and have common ancestors.

Part of the objection to such research relates to intellectual property and ownership issues. One view is that genetic information from Māori belongs to hapū, whānau and iwi collectively, not to individuals. But reflecting within-group diversity of opinion about research such as the Genographic Project, Manuka Henare noted: "It's the first question Maori ask of each other – where do you come from? Genetics offers another way of finding the answer to that question."

But with or without widespread support, in various ways genetic work is helping establish where historical migrations have taken place. A popular view is the Recent African Origin (RAO), or "out-of-Africa", hypothesis that modern humans originated from Africa and only very recently migrated outwards into the rest of the world.²³ Back in 2002 Kaufman and Cooper commented on how the U.S. Office of Management and Budget define the Black population in the U.S. This definition links ancestry back to Africa. But perhaps reflecting concerns about glossing over "difference", Kaufman and Cooper note that "[i]n the broadest interpretation, all of humanity meets this definition" (p. 292). However, this RAO theory is currently being challenged by an "Out of Africa Many Times" theory. While still subject to a number of unanswered questions about the interaction of modern humans and earlier humans, the multiple African exodus theory fits human genetic history more satisfactorily.

In the New Zealand context, DNA testing as well as other methods have been used to determine timings and origins of colonisation (Penny and Meyer 2008). Radiocarbon dating of Pacific rat (kiore) bones and native seeds (Landcare Research 2008) has suggested that the earliest time for human colonisation of New Zealand is about 1280–1300. But rat-based DNA testing has also been used to determine Pacific migrations (Matisoo-Smith et al 1998, Murray-McIntosh et al 1998, Pierson et al 2006, Wilmshurst et al 2008), including migration to New Zealand. This type of work suggests a genetic link between Māori and indigenous Taiwanese, suggesting Pacific people came to New Zealand ultimately from Asia, which accords with linguistic evidence (Lynch 1998, Himmelmann 2004, Friedlaender 2007).

CONCLUSION

The Human Genome Project, as well as other genetic research, is providing many new insights into "who we are". Such research not only has the potential to give us a better idea of who we are now, but also insights into where we have come from. But like many areas of

²² http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10338228.

²³ Archaeogeneticists have been collecting evidence of this theory since the 1990s, replacing the competing multi-regional hypothesis, which sees humans as originating from independent hominid populations (Morning 2008). Morning notes that in the U.S. the multi-regional theory helps distance Whites' ancestry from being shared with Blacks in a similar way that creationists distance themselves from any kind of relationship between "man" and "monkeys" (p. 124).

science, the results are being interpreted in a variety of ways. One view is that the genetic research confirms the commonality of all humans. Others see it as providing new ways to categorise people into distinct groups. As such, the scientific findings can be used to prop up concepts of social stratification or to break them down. In countries such as the U.S.A., where concepts of biological race are still deeply embedded in official statistics and day-to-day life, the findings from the genetic research are being debated in a number of settings in order to assess how the new knowledge either supports or undermines historical classification systems. At times this challenges or supports disciplinary-based thinking; for example, the strong view in sociology that races are a cultural rather than a biological construct. As part of these debates there are very practical questions around issues such as the role of “race-based” medicine.

In New Zealand, although concepts of race, itself culturally constructed, underpinned early official data collections, ethnicity is more explicitly a cultural construction. Through an official acceptance of the idea that ethnicity is culturally constructed, New Zealand is at the forefront of thinking when officially recording an important aspect of people’s identity. Yet it is also recognised that there are a variety of factors that influence how people construct their ethnic identity, many of them having some biological basis. These influences can be through ancestry and/or perhaps through expression of particular visual characteristics such as skin colour or eye shapes that are determined by genes. As in the U.S., there is some discussion in the health sector as to how much genetics and how much environmental issues affect health outcomes. There are some relatively clear areas where genes are likely to have some influence, such as the relationship between skin colour and skin cancer, but in most other areas the relationships are far less clear-cut.

However, while there is a general acceptance that ethnicity should be culturally constructed, one of the many reasons for the uneasiness about the growth in the New Zealander-type responses in the census, particularly from within the health sector, may be an ongoing attraction to the idea that people can be placed in discrete genetically determined categories.²⁴ It would be useful to carry out the type of research Morning has undertaken in the U.S. determining how ethnicity “experts” in New Zealand actually conceptualise ethnicity, and particularly how much they think there is some biological underpinning to the broad groupings used in policy research.

Although overall New Zealand is a small player in genetic research, genetically based research undertaken in New Zealand has influenced thinking about the timing of the arrival of Māori and where Māori migrated from. Research takes Māori back, in a journey of five millennia or more, to origins within Asia. But wider international research is still examining where we all originally came from and when.

Race and ethnicity have always been evolving concepts. They evolve through science, but also through discussion and debate that takes place far from laboratories. They also evolve somewhat differently in local contexts. The findings from the ongoing Human Genome Project, as well as other genetic research, are very likely to play a significant part in the ongoing evolution of these concepts and overall ideas of who we are. However, a range of factors, including the significant intermixing of people across various boundaries, suggest that personal definitions of identity are likely to become more important than “scientific” definitions imposed by external authorities.

²⁴ The New Zealander issue is discussed more fully in Kukutai and Didham (2009)

REFERENCES

- Anthony, A. (2008) "It's not all black and white" *Guardian Weekly*, 18 August: 36–37.
- "Babies to be genetically mapped – expert" (2009) *Dominion Post*, 10 February: B2.
- Belich, J. (1996) *Making Peoples: A History of the New Zealanders, from Polynesian Settlement to the End of the Nineteenth Century*, University of Hawai'i, Honolulu.
- Blakely, T., M. Tobias, J. Atkinson, L-C. Yeh and K. Huang (2007) *Tracking Disparity: Trends in Ethnic and Socioeconomic Inequalities in Mortality, 1981–2004*, Ministry of Health, Wellington.
- Callister, P. (2004) "Ethnicity measures, intermarriage and social policy" *Social Policy Journal of New Zealand*, 23: 109–140.
- Callister, P. (2007) *Special Measures to Reduce Ethnic Disadvantage in New Zealand: An Examination of Their Role*, Institute of Policy Studies, Wellington.
- Callister, P. (2008) "Skin colour: Does it matter in New Zealand?" *Policy Quarterly*, 4(1):18–25.
- Callister, P., R. Didham and A. Kivi (2009) *Who Are We? The Conceptualisation and Expression of Ethnicity*, Official Statistics Research Series 4. www.statisphere.govt.nz/official-statistics-research/series/vol-4.htm
- Condit, C.M. (2005) "'Race' is not a scientific concept: Alternative directions" *L'Observatoire de la Genetique*, 24, Septembre–Novembre, http://www.ircm.qc.ca/bioethique/obsgenetique/cadrages/cadr2005/c_no24_05/ca_no24_05_01.html.
- Craig, P., V. Halavatau, E. Comino and I. Caterson (2001) "Differences in body composition between Tongans and Australians: Time to rethink the healthy weight ranges?" *International Journal of Obesity and Related Metabolic Disorders*, 25(12):1806–1814.
- Darwin, C. (1872) *The Expressions of the Emotions in Man and Animals*, John Murray, London.
- Durie, M. (1998) *Whaiora: Māori Health Development*, Oxford University, Auckland.
- Edwards, S., V. McManus and T. McCreanor (2005) "Collaborative research with Māori on sensitive issues: The application of tikanga and kaupapa in research on Māori sudden infant death syndrome" *Social Policy Journal of New Zealand*, 25:88–104.
- Friedlaender, J. (2007) *Genes, Language, & Culture History in the Southwest Pacific*, Oxford University Press, New York.
- Grandinetti, A., H.K. Chang, R. Chen, W.Y. Fujimoto, B.L. Rodriguez and J.D. Curb (1999) "Prevalence of overweight and central adiposity is associated with percentage of indigenous ancestry among native Hawaiians" *International Journal of Obesity and Related Metabolic Disorders*, 23(7):733–737.
- Graves, J.L. (2001) *The Emperor's New Clothes: Biological Theories of Race at the Millennium*, Rutgers University, New Jersey.
- Hamer, P. (2007) *Maori in Australia: Nga Maori i Te Ao Moemoea*, Wellington: Te Puni Kokiri.
- Hamer, P. (2009) "Measuring Māori in Australia: A note on obstacles and insights" *Social Policy Journal of New Zealand*, 36.
- Harris, R., M. Tobias, M. Jeffreys, K. Waldegrave, S. Karlsen and J. Nazroo (2006) "Racism and health: The relationship between experience of racial discrimination and health in New Zealand" *Social Science and Medicine*, 63:1428–41.
- Henwood, W. (2007) "Māori knowledge: A key ingredient in nutrition and physical exercise health promotion programmes for Māori" *Social Policy Journal of New Zealand*, 32:155–164.

- Himmelmann, N. (2004) *The Austronesian Languages of Asia and Madagascar*, RoutledgeCurzon, London.
- Jones, R., S. Crengle and T. McCreanor (2006) "How tikanga guides and protects the research process: Insights from the Hauora Tane project" *Social Policy Journal of New Zealand*, 29:60–77.
- Kandel, E. (2007) *In Search of Memory: The Emergence of a New Science of Mind*, New York, Norton.
- Kandel, E. (2008) *Principles of Neural Science*, McGraw-Hill Professional, New York.
- Kaufman, J.S. and R.S. Cooper (2002) "Commentary: Considerations for use of racial/ethnic classification in etiologic research" *American Journal of Epidemiology*, 154(4):291–298.
- Keddell, E. (2007) "Cultural identity and the Children, Young Person's and Their Families Act 1989: Ideology, policy and practice" *Social Policy Journal of New Zealand*, 32:49–71.
- King, M. (2003) *The Penguin History of New Zealand*, Penguin, Auckland.
- Kukutai, T. and R. Didham (in press) "In search of ethnic New Zealanders: National naming in the 2006 census" *Social Policy Journal of New Zealand*, 36.
- Landcare Research (3 June 2008) *Kiore Provides New Insights into New Zealand's Initial Colonisation*, www.landcareresearch.co.nz/news/release.asp?Ne_ID=268 [accessed 14/11/08].
- Lee, S., J. Mountain and B.A. Koenig (2001) "The meanings of "race" in the New genomics: Implications for health disparities research" *Yale Journal of Health Policy, Law, and Ethics*, 1:33–75.
- Lynch, J. (1998) *Pacific Languages: An Introduction*, University of Hawai'i Press, Honolulu.
- Malik, K. (2008) *Strange Fruit: Why Both Sides are Wrong in the Race Debate*, Oneworld, Oxford.
- Matisoo-Smith, E., E. Roberts, G. Irwin, J. Allen, D. Penny and D. Lambert (1998) "Patterns of prehistoric human mobility indicated by mitochondrial DNA from the Pacific rat" *Proceedings of the National Academy of Sciences*, 95:15145–15150.
- Morning, A. (2007) "'Everyone knows it's a social construct': Contemporary science and the nature of race" *Sociological Focus*, 40(4):436–454.
- Morning, A. (2008) "Reconstructing race in science and society: Biology textbooks, 1952–2002" *American Journal of Sociology*, 114: S106–137.
- Murray-McIntosh, R., B. Scrimshaw, P. Hatfield and D. Penny (1998) "Testing migration patterns and estimating founding population size in Polynesia by using human mtDNA sequences" *Proceedings of the National Academy of Sciences*, 95:9047–9052.
- Nazroo, J.Y. (2003) "The structuring of ethnic inequalities in health: Economic position, racial discrimination, and racism" *American Journal of Public Health*, 93(2):277–284.
- O'Regan, H.M. (2001) *Ko Tahu, Ko Au: Kāi Tahu Tribal Identity*, Horomaka, Christchurch.
- Pearce, N., S. Foliaki, A. Sporle and C. Cunningham (2004) "Genetics, race, ethnicity, and health" *British Medical Journal*, 328:1070–1072.
- Penny, D. and A. Meyer (2008) "DNA and the settlement of Polynesia" in K.R. Howe (ed.) *Vaka Moana: Voyages of the Ancestors* (pp. 98–99), University of Hawaii Press, Honolulu.
- Pierson, M., R. Martinez-Arias, B. Holland, N. Gemmell, M. Hurlles and D. Penny (2006) "Deciphering past human population movements in Oceania: Provably optimal trees of 127 mtDNA genomes" *Molecular Biology and Evolution*, 23:1966–1975.
- Pool, I. (1991) *Te Iwi Māori*, Auckland University, Auckland.

- Rush, E. (2008) Lifestyle (e.g. exercise, diabetes and obesity problems) and health for Asian children and young people. Paper presented to the Third International Asian Health and Wellbeing Conference: Building healthy Communities North and South. Auckland, September 8-9.
- Salmond, A. (1991) *Two Worlds: First Meetings Between Māori and Europeans 1642–1772*, Penguin, Auckland.
- Satel, S.L. (2000) *PC, M.D.: How Political Correctness is Corrupting Medicine*, Basic Books, Boulder, CO.
- Schwartz, R.S. (2001) “Racial profiling in medical research” *New England Journal of Medicine*, 344(18):1392–1393.
- Shaw, J.H.F. (1988) “Malignant melanoma in Auckland, New Zealand” *Journal of Surgery, Gynecology and Obstetrics*, 166(5):425–30.
- Shaw, J.H.F. (2008) “Melanoma in New Zealand: A problem that is not going away” *New Zealand Medical Journal*, 121(1279):1–4.
- Sorrenson, M.P.K. (1956) “Land purchase methods and their effects on Māori population, 1865–1901” *Journal of Polynesian Society*, 65(3):183–189.
- Stephan, C.W. and W.G. Stephan (2000) “The measurement of racial and ethnic identity” *International Journal of Intercultural Relations*, 24(5):541–552.
- Stöger, R. (2007) “In vivo methylation patterns of the leptor promoter in human and mouse” *Epigenetics*, 1:4.
- Stöger, R. (2008) “The thrifty epigenotype: An acquired and heritable predisposition for obesity and diabetes?” *Bioessays*, 30(2):156–166.
- Swinburn, B.A., S.J. Ley, H.E Carmichael and L.D Plank (1999) “Body size and composition in Polynesians” *International Journal of Obesity and Related Metabolic Disorders*, 23(11):1178–83.
- Taylor, S.C. (2002) “Skin of color: Biology, structure, function, and implications for dermatologic disease” *Journal of the American Academy of Dermatology*, 46(2):41–62.
- Templeton, A.R. (1998) “Human races: A genetic and evolutionary perspective” *American Anthropologist*, 100(3):632–650.
- Wang, J. (2008) “Diabetes and cardiovascular disease in the Asian population of New Zealand” paper presented to the *Third International Asian Health and Wellbeing Conference: Building Healthy Communities North and South*, 8–9 September 2008, Auckland.
- Wilmshurst, J., A. Anderson, T. Higham and T. Worthy (2008) “Dating the late prehistoric dispersal of Polynesians to New Zealand using the commensal Pacific rat” *Proceedings of the National Academy of Sciences*, 105:7676–7680.
- Wilson, D. (2008) “Viewpoint: Should non-Māori write and research about Māori?” *Kai Tiaki Nursing New Zealand*, 5:20–22.

MEASURING MĀORI IN AUSTRALIA: INSIGHTS AND OBSTACLES

Paul Hamer¹
Senior Associate
Institute of Policy Studies
Victoria University of Wellington

Abstract

There are now as many as one in six Māori living in Australia. Due to census practice and a lack of administrative data in Australia on ethnicity, it has been, and remains, difficult to calculate their number or assess their characteristics. Despite these challenges, important insights for social policy in New Zealand can be gained from endeavouring to do so.

CHALLENGES TO MEASURING MĀORI IN THE AUSTRALIAN CENSUS

The Australian census does not have an ethnicity question. Instead, it asks respondents to select the ancestry or ancestries with which they “most closely identify” (Australian Bureau of Statistics 2006:7). The most common responses from the previous census are included as tick-box options to speed data processing, but since these are also all nationalities – including “Australian” – other examples are specifically provided on the form to show that ancestry rather than nationality is being sought. These include Hmong, Kurdish and Māori.

An ancestry question was first used in Australia in 1986. With the dismantling of the “White Australia” policy in the early 1970s, and the influx since then of large numbers of “new Australians”, the question was intended to measure the manifest changes in the composition of the Australian population. In the lead-up to the formulation of the 1986 census, the Australian Bureau of Statistics had given active consideration to whether to measure ancestry or ethnicity (Kunz and Costello 2003:4). The former was chosen, but it was hardly an unqualified success. Due to a high non-response rate and confusion as to its meaning, the ancestry question was shelved for the 1991 and 1996 Australian censuses while officials considered different types of questions that might yield better-informed responses. A question on ancestry was reinstated in the 2001 census and retained in very similar form in 2006. It has nevertheless continued to have its limitations, as we shall see.

In 1986 respondents were invited to trace their ancestry back to their grandparents and were given space to insert up to three nominated ancestries. The intention can never have been to count all three, however, as the form had only two coding boxes beneath these three lines. This led to an unknown number of lost ancestries. For groups with typically high multiple-ancestry response rates, such as New Zealanders (including Māori), this would have had a disproportionate impact, although country of birth figures provided an alternative (and certainly more satisfactory) means of measuring the number of New Zealanders in Australia. The Māori total of 26,035 people had other problems: it included more than one thousand

¹ I acknowledge the helpful comments of Paul Callister, Robert Didham and Richard Bedford on a draft of this paper.

Cook Island Māori,² whom demographer Jeremy Lowe was told had been included in the same code (1990:7).

On top of these challenges, the subsequent dropping of the ancestry question, coupled with the 1986 removal of the ethnic origin question from New Zealand arrival and departure cards, suddenly made it practically impossible to calculate the size of the rapidly growing Māori population in Australia. Those interested in this population were relieved, therefore, when the ancestry question was returned in 2001. This time the census gave a total of 72,956 Māori, but the impact of lost ancestries was even greater. This was because census respondents were invited to trace their ancestry back to their great-grandparents, and were given space on the form to enter several unlisted ancestries, but again were not advised that only two ancestries would be counted and thus were unable to prioritise accordingly. Moreover, the tick-box options were counted first, in descending order from the most popular (English and Irish), thus creating an enormous bias towards them.

In 2003 the Australian Bureau of Statistics attempted to calculate the scale of the lost ancestries by sampling some 367,000 census forms. From this exercise it was able to estimate what the ancestry totals should have been if all entered ancestries had been counted. The Māori estimate was 17,525 lost ancestries, or 19.4% of the official total (Kunz and Costello 2003:56). Although Māori were not as affected as some other groups (around 50% of Jamaican, French and Swedish ancestries were lost, for example), this nevertheless showed that the official 2001 figure was only a subset of the entire Australian-resident Māori population.

This perhaps raises the question as to whether all those who had named at least two other ancestries as well as Māori would have regarded themselves as being of Māori ethnicity, or whether the 40,303 who gave sole Māori ancestry would have been the most likely to have identified as such. These questions inevitably arise when one attempts to compare the Australian and New Zealand census results. The New Zealand census asks a Māori descent question as well as an ethnicity one, and there is an argument for comparing the descent total with the Australian census ancestry tally given the similarity of the concepts, if not the question form. But it is highly likely that most, if not all, these 90,000 people (that is, the official count plus the estimated number of lost ancestries) would also have identified as being of Māori ethnicity had such a question been asked, because the Australian ancestry question is clearly interpreted by many as one of identity. The use of the word “identify” in the 2001 census guide and the millions answering “Australian” bear testimony to that.³

Doubtless as a response to the problem of lost ancestries, in 2006 the question and guide introduced an instruction to respondents to enter two ancestries only. When the results were released in June 2007, the official Māori total rose to 92,912, a 27% rise over 2001. Assuming census respondents adhered to the new instruction, however, this in fact represented something of a contraction, for we know that there were already 90,000 Māori-ancestry respondents in 2001. The 2006 figure is certainly not explained by a net migration gain of New Zealand citizens from Australia – indeed, the number of New Zealand-born in

² That is, 1,048 persons who were either born in the Cook Islands or both of whose parents were born in the Cook Islands.

³ The 2006 census guide (Australian Bureau of Statistics 2006:7) even included the explanation that “Ancestry is not necessarily related to the place a person was born but is more the cultural group that they most closely identify with”. This definition is rather similar to the way the 2006 New Zealand census *Guide Notes* defined “ethnic group”.

Australia rose 9.5% from 2001 to 2006. What it probably represents instead is people squeezing out “Māori” from their ancestry choices because of the new restriction. This kind of contraction was common across a large number of ancestry groups, with many others recording lower tallies than their estimated 2001 total.

Alternatively – or rather additionally – the 2006 totals may well reflect the ongoing entry of more than two ancestries by many census respondents, regardless of the new instruction. Although the advice of the Australian Bureau of Statistics in 2007 was that the 2003 data quality investigation of ancestry responses would not be repeated, there may even have been a similar number of lost ancestries in 2006 to 2001 (pers. comm., Robert Didham, 23 January 2009).

Several other complications are worth noting about the identification of the Australian-resident Māori population. The first is that, although now classified under a separate code, it is impossible to prevent Cook Island Māori being caught up in the Māori ancestry total if they simply enter “Māori” on the census form.⁴ As a result, there were 654 individuals among the 72,956 Māori in 2001 born in the Cook Islands (Department of Immigration and Multicultural and Indigenous Affairs 2003:65) and 540 among the 92,913 in 2006 (Department of Immigration and Citizenship, no date a:2). Given the numbers of those with Cook Island backgrounds born in New Zealand and the level of intermarriage between Māori and Cook Island Māori, these totals are likely to represent the minimum number of Cook Island Māori included in the Māori ancestry tallies. With only two ancestries being recorded it is difficult to know which of these ancestries is more likely to have been lost where both and a third ancestry (such as a tick-box option) were stated.

The second matter is that, quite apart from any “squeezing out” or loss of ancestries, many Māori in Australia appear quite content not to enter “Māori” as an ancestry response at all. Te Puni Kōkiri’s 2006 survey of 1,205 (predominantly New Zealand-born) Māori in Australia revealed that some 12.5% would answer the census only as “New Zealander” (Hamer 2007:31–32). This is despite the fact that the very act of completing this self-selecting survey was certainly an expression of Māori identity. Answering the ancestry question in this way was explained by some as arising from one’s primary frame of reference overseas being as a New Zealander. It may well also be that similar proportions of Australian-born Māori would answer simply as “Australian”. The question arises as to whether these people should simply be discounted from attempts to measure the number and characteristics of Māori in Australia. On the basis of the Te Puni Kōkiri survey, at least, this seems unjustifiable. The nomination by them of their nationality to answer a question about ancestry provides no ground to conclude that such respondents would answer “yes” to a New Zealand census Māori descent question and “no” to a Māori ethnicity one.⁵

Finally, it should also be added that Māori in Australia may be significantly undercounted. Post-enumeration surveys in Australia have tended to indicate that the New Zealand-born have roughly double the national average of undercounting (much of which stems from their typically young-adult age profile), but the Māori proportion is likely to be even higher. This assumption is based on their high degree of residential mobility, their self-perception as

⁴ The same problem occurs in the New Zealand census when Cook Island Māori enter “Māori” in response to the census ethnicity question.

⁵ Some verification of the likely extent of this type of response by Māori in Australia may be gleaned from an analysis of the ancestry responses for those saying they speak Māori in the home, or those nominating Rātana or Ringatū as their religion.

temporary migrants, and their disinclination to take part in the Australian polity, as suggested by their very low take-up of Australian citizenship. Even Te Puni Kōkiri survey respondents who completed the survey in the two months immediately after the 2006 Australian census – and in whose minds the census should have been fresh – reported a remarkably high degree of non-response to it (Hamer 2007:27–28, 61–70, 151–154).

WHY MEETING THESE CHALLENGES IS IMPORTANT

Altogether, therefore, there are numerous challenges to accurately measuring the Māori population in Australia. Despite these difficulties it is important to try to do so, for a number of reasons. In the first place, it is critical that there be an understanding of the extent of out-migration of Māori (and other New Zealanders) to Australia. If Māori are clearly over-represented in the New Zealand migrant population in Australia, then the impact on them of negative “push factors” in New Zealand is likely to be larger than imagined. At the 1986 census those reporting Māori ancestry were just 8.5% of the New Zealand-born, but by 2006 this had risen to 15.1%, thus indeed suggesting – despite the ancestry question flaws – an over-representation of Māori among New Zealand migrants to Australia in the last two decades (Hamer 2007:25, Department of Immigration and Citizenship no date b:2).⁶

It also seems important to understand how Māori are faring in Australia, for two reasons. The first is so that they can be compared with Māori in New Zealand, to enable the impact of their migration on their education, choice of partner, health, employment, and so on to be measured. A common suggestion is that Māori fare worse in social statistics the further removed they are from access to their culture⁷, but this may not hold true for expatriates who have become a voluntary as opposed to an involuntary minority. Another common perception is that Māori in Australia enjoy higher wages and a better standard of living than in New Zealand, and this notion undoubtedly drives further migration. But just how well off Māori really are in Australia, and how vulnerable they may be there to economic downturns, could have a major influence on their likelihood to return to New Zealand.

Then there is the case for measuring Māori in Australia for the sake of gauging the overall state of Māori development. What point is there, one might wonder, in fixating on Māori unemployment levels in New Zealand when one excludes from consideration 16% (and rising) of the Māori population who live within the same trans-Tasman labour market? In this era of globalisation, and especially given the ongoing levels of connectedness within whānau, hapū and iwi, it seems logical to measure Māori progress and achievement beyond the confines of the New Zealand nation state. What impact, for example, has out-migration had on the sum health of te reo Māori, or on Māori participation in tertiary education, or on overall Māori life expectancy or rates of imprisonment?

⁶ The figure of 15.1% is my calculation from the more limited figures supplied in the Department of Immigration and Citizenship paper. “English”, with 181,460 responses, comprised 33.5% of the total New Zealand-born ancestry responses and “Māori” made up 10.9%. This means there must have been around 541,000 ancestry responses for the 389,470 New Zealand-born, and that the Māori proportion was around 59,000 (and thus 15.1% of all New Zealand-born).

⁷ Mason Durie, for example, has written (with reference to Te Hoe Nuku Roa, a longitudinal study of Māori households) that a “secure Māori identity appears to be correlated with good health, and with better educational outcomes even in the presence of adverse socio-economic conditions”. His definition of those with a “secure Māori identity” is “competent Māori speakers” who “have regular contact with Māori cultural institutions and networks and shares in Māori land” (Durie 2001:56).

Unfortunately, it is uncommon for Australian administrative data to be collected or published on an ethnic or ancestry basis. Quite aside from issues of census consistency, therefore, there are other enormous barriers to measuring Māori in Australia. In an ideal world compatible census data and similar approaches to the recording of ethnicity in administrative statistics should be an objective of some importance for officials on both sides of the Tasman. In the meantime, the Australian census can nevertheless provide much valuable information about Māori in Australia, especially if one remains conscious of the limitations of the data.

REFERENCES

- Australian Bureau of Statistics (2006) *Census Household Guide 2006*, [www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/372D18CAF073ECABCA2571680005173D/\\$File/household%20guide%202006.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/372D18CAF073ECABCA2571680005173D/$File/household%20guide%202006.pdf) [accessed 20/1/09]
- Department of Immigration and Citizenship (no date a) *Community Information Summary: Cook Islands-born*, www.immi.gov.au/media/publications/statistics/commsumm/_pdf/cook-islands.pdf [accessed 20/1/09].
- Department of Immigration and Citizenship (no date b) *Community Information Summary: New Zealand-born*, www.immi.gov.au/media/publications/statistics/commsumm/_pdf/new-zealand.pdf [accessed 20/1/09].
- Department of Immigration and Multicultural and Indigenous Affairs (2003) *The People of Australia: Statistics from the 2001 Census*, www.immi.gov.au/media/publications/research/_pdf/poa-2008.pdf [accessed 20/1/09]
- Durie, M. (2001) *Mauri Ora: The Dynamics of Māori Health*, Oxford University Press, Melbourne.
- Hamer, P. (2007) *Māori in Australia: Ngā Māori i te Ao Moemoeā*, Te Puni Kōkiri, Wellington.
- Kunz, C. and L. Costello (2003) *2001 Census: Ancestry – Detailed Paper*, Australian Bureau of Statistics, Canberra
- Lowe, J. (1990) *The Australian Māori Population: Ngā Māori ki Ahiterēria*, New Zealand Planning Council, Wellington.

PRIORITISING ETHNIC DATA FROM SCHOOLS: WHO ARE WE MISSING? A RESEARCH NOTE.

Frances Leather¹
Institute of Policy Studies
Victoria University of Wellington

Abstract

This note reports on research investigating whether the ethnic groups of young adolescent New Zealanders are fully represented when data are prioritised so that only one ethnicity per person is counted. Prioritised data reported from the school sector are compared with non-prioritised reported data from the 2006 census, and also with census data when prioritised. The research clearly indicates that the prioritising of data leads to significant understatements in the reporting of proportions of Pacific and Asian domestic students enrolled in our schools.

BACKGROUND

It is not uncommon, in both the media and official reports, to read sentences such as “16% of the students at the local school are Pasifika”.² Although this statement seems straightforward, it is not. It depends on which data are being used. Schools record up to three (or more) ethnicities for each student at the time of enrolment, but the collector of official education statistics, the Ministry of Education, reports ethnicity based on only one per student, following a system of prioritisation that used to be used by Statistics New Zealand but which it no longer recommends. Under this system, for example, at the broadest level “Pacific peoples” comes second to “Māori”, so that a student who identifies as Pacific peoples /Māori is reported only in the Māori category. So although schools may have a complete count of all students who include Pacific peoples as an ethnicity, reported national education statistics do not. Without further information (which is sometimes, but not always, provided in fine print), it is simply not clear whether the 16% is based on the complete school count or on a count based on the prioritised list.

This research note draws on a longer technical working paper³ that considers the reporting of ethnicity for New Zealand’s school students (Leather 2009). The wider paper examines 2006 data for ethnic groups as categorised by the Ministry of Education at the broadest level – European/Pākehā, Māori, Pasifika, Asian and Other – as well as specific Pacific and Asian ethnicities where data are available. A number of associated issues are discussed, including “New Zealander”-type responses being observed in census collections (see Kukutai and Didham 2009). In this note, however, I focus on the findings for the three ethnic groups Māori, Pacific peoples and Asian in order to present the effect of the continued use of prioritised ethnicity data. The system of ethnic prioritisation, including why it was introduced, what may be wrong with it and alternative ways of counting, is described in other papers in this collection in Issue 36 of the *Social Policy Journal of New Zealand*.

¹ I would like to thank the Foundation for Research, Science and Technology for funding this research.

² The Ministry of Education often uses the term “Pasifika”, while Statistics New Zealand uses “Pacific peoples”. In this note I primarily use “Pacific peoples”.

³ A number of people reviewed the working paper. I would like to thank them all for their assistance. Any errors in that paper or in this research note are entirely my own.

One way of assessing the impact of reporting based on prioritisation is to compare census data with national school roll data. Census ethnicity data can be reported in a variety of ways (see the other papers in this collection), but in this note the two systems used, both based on the “usually resident” count, are:

- new (2005) statistical standard – multiple responses
- old statistical standard – prioritised to one response in order to match the method of reporting ethnicity data used in the school roll return.

There are acknowledged limitations to a comparison between the census and the national roll return, and the main paper presents a detailed discussion on possible differences between these data sets. Key points include, first, that in order to have a standard five-year age band where all are of compulsory school age⁴, the comparison is made using data for 10–14-year-olds, hereafter called “young adolescents”. It is worth noting that in 2006 this group made up over 40% of the total school roll return and are therefore likely to provide a reasonably representative estimate for the school population. Second, there is a time difference between the reporting of the data sets: the census was carried out on 7 March 2006 and the relevant roll return on 1 July 2006. Overall, reasons for possible differences between the two data collections include:

- data supplied by different people
- people absent from one dataset
- people eligible to be included in only one of the data sets
- data collected at different times
- possible changes in ethnic self-identification between the two data sets
- reporting of up to six responses per person in the census compared with just one response per person from schools.

Because people may identify with more than one ethnicity, the recommendation in the 2005 standard is that all official collections of statistics be capable of capturing six ethnicities per person; and if that is not yet possible then capture at least three. In the census, as many ethnicities are collected as individuals wish. Then total counts based on up to six ethnicities per person⁵ are reported, with people counted in every category they have indicated. The Ministry of Education also uses the definition of ethnicity given in the 2005 standard and states that schools should allow for collection of up to three self-identified ethnicities per student; however, they are instructed to count only one of these for the formal roll return⁶ (Ministry of Education 2008: 23, 24), following prescribed priorities (see Table 1). The example given in the opening sentence of this research note is explained by following this table. A student who identifies as Tongan/Māori, for example, will be reported as Māori.

⁴ Standard five-year age bands used by Statistics New Zealand are 0–4 years, 5–9 years, 10–14 years, and so on. Children aged less than six or more than 15 do not have to be enrolled in a school; it is possible to get an early leaving exemption from the age of 15 years (Education Act 1989, ss 20, 22).

⁵ There is a process for selecting the six ethnicities to be recorded when more than six are given (Statistics New Zealand 2005, Appendix 2).

⁶ These formal Roll Returns are paper-based; ethnicity data are aggregated. Schools that use a computerised student management system (SMS) are strongly encouraged to submit their non-aggregate associated data file with their Roll Return. Both these SMS data files and the new national electronic enrolment system for schools, ENROL, contain information on individual students, including all of their recorded ethnicities. (The March 2009 Roll Return for primary and intermediate schools was done from ENROL.) (Ministry of Education, personal communication, April 2009).

Table 1 Ethnic Group Reported in Roll Returns (current students)

<i>Students are reported in one group only</i> To determine which ethnic group to report for a particular student, start at the top of the left-hand list and use the first ethnicity that applies to this student	
New Zealand Māori	<i>(Māori)</i>
Tokelauan Fijian Niuean Tongan Cook Islands Māori Samoan Other Pasifika	<i>(Pasifika)</i>
Southeast Asian Indian Chinese Other Asian	<i>(Asian)</i>
Other (this group includes Not Stated)	<i>(Other)</i>
Other European NZ European/ Pākehā	<i>(European/Pākehā)</i>

Source: Ministry of Education 2008:24

Advantages and disadvantages of the two methods of reporting have been discussed in a number of settings (e.g. Leather 2009, Callister 2004). In brief, allowing all self-identified ethnicities for each person to be reported, as in the census, means people are represented as they wish, but one outcome is that when all ethnicities are considered the sum of the percentages of people identifying with each will be more than 100. Allowing only one ethnicity as reported by the Ministry of Education does provide a one-to-one matching between the total ethnicities reported and the total number of people involved, so that the sum of the percentages of people identifying with each ethnicity will be exactly 100. However, for a student with multiple ethnicities, under this practice only one of these is reported at the national level. While this need not directly affect the student, as all their ethnicities can be recognised and acknowledged within the school, indirectly they are being denied the opportunity to fully contribute to the pool of national knowledge based on education ethnicity data.

DATA COMPARISONS

The main comparison presented in this note is based on two data sets for young adolescents, ranked at level 1 in the Statistics New Zealand hierarchy of ethnicity. These are:

- all responses to the ethnicities Māori, Pacific peoples or Asian recorded for the 2006 census (this is a total count where no prioritisation occurs)
- prioritised responses to the ethnicities Māori, Pacific peoples or Asian reported in the 2006 roll return.

A second comparison is also presented using census data that have been prioritised following the system used in the roll return.

In all, there were 306,009 young adolescents counted in the census, but the number of their responses to the ethnic question was much higher; for example, when all ethnic groups at

level 1 are considered,⁷ there were a total of 357,669 responses. There were 303,434 young adolescents included in the roll return⁸, and because reported ethnicities are prioritised, there were also 303,434 responses (Table 2). When the census data were similarly prioritised, there were 306,009 responses.

Table 2 Number of Young Adolescents and Number of Reported Ethnicity Responses, Census and Roll Return, 2006

	Numbers of young adolescents (population)	Numbers of responses reported*
Census	306,009	357,669 (level 1, not prioritised)
School roll	303,434	303,434
Difference	2,575	54,235

Sources: Ministry of Education 2007:57, Statistics New Zealand 2006a.

* Includes "ethnicity not stated".

FINDINGS

Māori

Unlike other level 1 ethnicities in both the census and the roll return, prioritising the data does not affect the number of responses reported for Māori, because this ethnicity heads the prioritisation list. All who chose Māori as an ethnicity are included in both populations. The census data reported here indicate that of the young adolescent New Zealand population, 21.8% self-identified Māori as an ethnicity. Relative to this proportion, the roll return reported about 3% more young adolescents of Māori ethnicity (see Figure 1).

Pacific Peoples and Asians

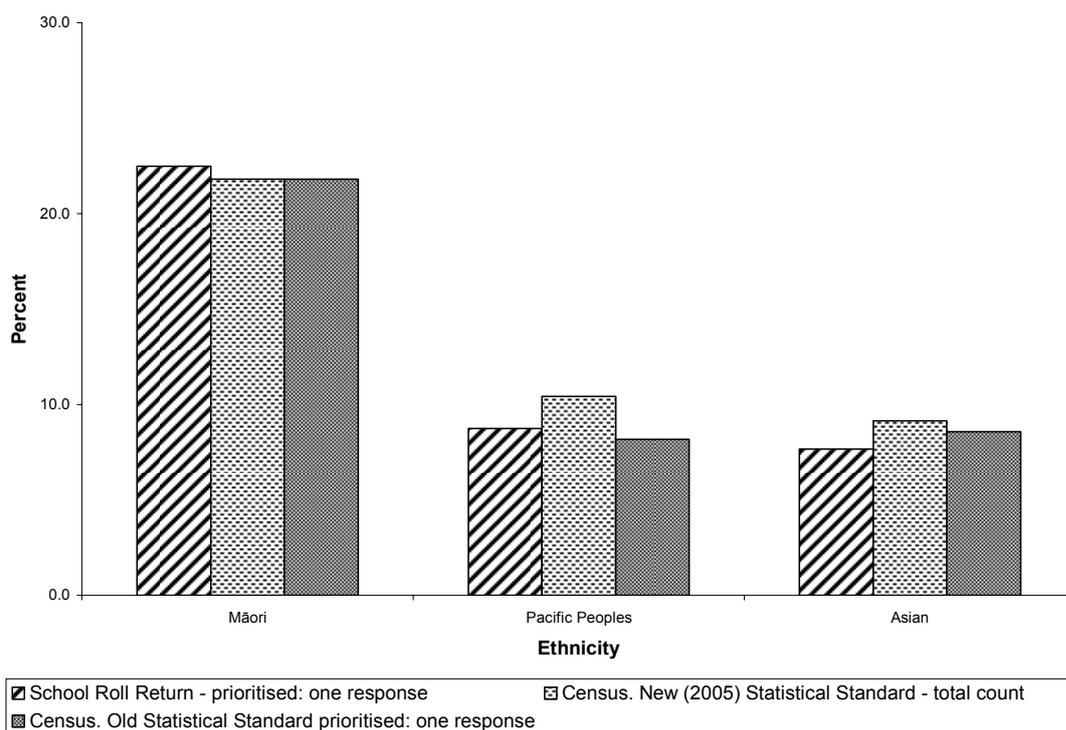
As expected, Figure 1 shows that prioritising data does affect the number of responses reported for both Pacific peoples and Asian. Census data indicate that, of the young adolescent New Zealand population, when the data are not prioritised (2005 standard) 10.4% self-identified Pacific peoples as an ethnicity. Relative to this proportion, the prioritised census data show an understatement of 22% and the roll return indicates an understatement of about 16%.

Census data indicate that, of the young adolescent New Zealand population, when the data are not prioritised (2005 standard), 9.1% self-identified Asian as an ethnicity. Relative to this proportion, the prioritised census data show an understatement of 6%, and the roll return indicates an understatement of about 16%.

⁷ Level 1 ethnicities: European, Māori, Pacific peoples, Asian, Middle Eastern / Latin American / African, Other ethnicity, Not elsewhere included (Statistics New Zealand 2005).

⁸ However, there were 3,782 children aged 10 to 14 who were known to be officially not attending a school on 1 July 2006 (information released by the Ministry of Education under the Official Information Act).

Figure 1 Māori, Pacific Peoples and Asian 10–14-year-olds, School Roll Return¹ and Census,² 2006



1 Source: Ministry of Education 2007:57. Denominator: total school roll return for 10–14-year-olds
 2 Source: Statistics New Zealand 2006a. Denominator: census population count for 10–14-year-olds

SUMMARY TABLE

Table 3 Indicative Understatements¹ of Ethnic Populations, 10-14-year-olds, when Data Are Prioritised

Percentage Understatements of Prioritised Data compared with Total Count Data		
	Census 2006	Roll Return 2006
Māori	0%	[3% "overstatement"] ²
Pacific peoples	22%	16%
Asian	6%	16%

1 The table shows proportions based on prioritised data relative to proportions based on Census 2006 total count data. Percentages are rounded to the nearest whole number
 2 Given the differences between the data sets, as previously described, this 3% difference is negligible.

CONCLUSION

Earlier research from Statistics New Zealand, based on ethnicity data from the 2001 census, shows that when these data were prioritised for the group of all people aged under 15, there was a 29.5% understatement for Pacific peoples and a 10.5% understatement for Asian (Statistics New Zealand 2006b). For the research presented here, although there is no immediate explanation for the higher understatement for the Asian group in the roll return compared with the census, when data are prioritised the presence of understatements for 10–

14-year-old Pacific and Asian people is clear, and the Statistics New Zealand results suggest that this is a trend that will increase as the younger age groups age.

The analysis of data presented in this research note clearly indicates that the prioritising of data leads to significant understatements in the reporting of proportions of Pacific and Asian domestic students enrolled in our schools. As indicated in other papers in this collection, ethnic counting is fraught with challenges. The number of students counted in each ethnic group depends on a range of factors, including how questions are asked, who asks them and who answers them, when they are asked, and how the data that are recorded are then reported. This research note has concentrated on the last of these influences; that is, on recording and reporting.

We live in a country where increasing numbers of children affiliate with more than one ethnicity. A system that allows just one ethnic group may well be problematic, not only for these children but, in the context of this research note, for schools. Further, ethnicity information based on this system is undoubtedly (albeit unintentionally) inadequate for those undertaking research and policy development.

REFERENCES

- Callister, P. (2004) "Ethnicity measures, intermarriage and social policy" *Social Policy Journal of New Zealand*, 23:109–140.
- Kukutai, T. and R. Didham (2009) "In search of ethnic New Zealanders: National naming in the 2006 census" *Social Policy Journal of New Zealand*, 36.
- Leather, F. (2009) *Prioritising Data in an Increasingly Multi-ethnic Society*, Working Paper IPS 09/05, Institute of Policy Studies, Wellington, <http://ips.ac.nz/index.html>.
- Ministry of Education (2007) *Education Statistics of New Zealand for 2006*, Data Management and Analysis Division, Ministry of Education, Wellington, www.educationcounts.govt.nz/publications/ece/2507/ed_stats_nz_06 [accessed 17/02/09].
- Ministry of Education (2008) *2009 Roll Return Guidelines, Primary and Intermediate Schools*, Ministry of Education, Wellington.
- Statistics New Zealand (2005) *Statistical Standard for Ethnicity*, Statistics New Zealand, Wellington, www2.stats.govt.nz/domino/external/web/carsweb.nsf/55d63ae38ba3a25e4c2567e6007f6686/35d9b7e17a1d6151cc25701100031353?OpenDocument [accessed 14/04/09].
- Statistics New Zealand (2006a) *2006 Census of Population and Dwellings*, Statistics New Zealand, Wellington.
- Statistics New Zealand (2006b) *The Impact of Prioritisation on the Interpretation of Ethnicity Data*, Statistics New Zealand, Wellington.

**ETHNICITY, IDENTITY AND PUBLIC POLICY: CRITICAL PERSPECTIVES ON
MULTICULTURALISM BY DAVID BROMELL
INSTITUTE OF POLICY STUDIES, VICTORIA UNIVERSITY OF WELLINGTON,
2008**

Karen Baehler
Senior Lecturer
School of Government
Victoria University of Wellington

“New Zealand is demographically multicultural, formally bicultural, and with few exceptions, institutionally monocultural.” Associate Professor James Liu, School of Psychology, Victoria University of Wellington (Liu 2007)

Competing approaches to population diversity are not unique to New Zealand, and wherever they are found in contemporary societies they raise difficult normative questions: Are our cultural arrangements fair and just? What criteria of fairness and justice should we use to evaluate them? If these arrangements fall short of our standards, how should they be changed? When is multiculturalism, biculturalism, or monoculturalism appropriate, if ever? Rapid global trends towards population heterogeneity have propelled the search for theoretical principles and practical programmes that can settle group-based disputes, guide social policy, and resolve once and for all the seemingly endless debates between biculturalists, multiculturalists, and advocates of a unitary national identity. Personal and political slogans – such as “I heart cultural diversity” (Shying 2008) or “Put the brakes on immigration” (Peters 2002) – try to fill this niche, but they tend to fuel conflict rather than dampening it. A new book by David Bromell, *Ethnicity, Identity and Public Policy: Critical Perspectives on Multiculturalism* (hereafter *EIPP*) offers a welcome alternative to the slogans and sound-bite wars.

The purpose of *EIPP*, according to its author, is to promote “reasoned thoughtfulness” about the public policy implications of cultural pluralism by gathering intellectual resources relevant to the debates. Towards that end, Bromell canvasses and critiques theories developed by seven political theorists on the subject of population diversity and legitimate state responses to it. He then applies the lessons learned from these theories to New Zealand. The seven theorists (Brian Barry, Ghassan Hage, Will Kymlicka, Bhikhu Parekh, Michael Sandel, Charles Taylor, and Iris Marion Young) are well chosen to cover a variety of more-or-less philosophical perspectives within the general category of democratic liberalism, and a range of national settings within the general category of English-speaking, immigrant-receiving OECD countries. Other theorists and commentators are employed as needed. Bromell treats his subjects with care and respect, presenting their main ideas fairly while rigorously identifying both strengths and weaknesses in their arguments.

The final result is a jam-packed introduction to a sprawling topic that has attracted so much attention from political theorists over the past few decades that it now qualifies as its own subfield. Several large themes thread their way through the *EIPP* story and help give it some shape. Chief among these is the tension between two fundamental values: the *right*, meaning protection of individual civil liberties such as equal treatment under the law and freedom of speech and religion, and the *good*, meaning shared pursuit of commonly held values such as economic growth, social justice, or environmental preservation. A hypothetical policy

designed to support an indigenous people's language, to take one example, would seek to further a public *good* in the form of cultural survival, but in the process might violate some citizens' *rights* to equal treatment under the law because all minority languages cannot be equally supported by government. Such a policy could encounter resistance from citizens who don't agree that a particular culture's survival should be considered part of the public good and supported through the public purse. Some of the opponents of a hypothetical language policy might even belong to the indigenous population in question, in which case a direct clash of individual versus group interests becomes especially clear.

To resolve this sort of dispute, one could argue for a hierarchy of group-differentiated citizenship rights in which the cultural practices of indigenous people qualify for special treatment due to the involuntary nature of the people's accession or their status as Treaty partners or first occupants of a territory. (This approach seeks to move the whole debate to the rights side of the ledger, thus eliminating the complications associated with defining a "common good"). Alternatively, one could appeal to effectiveness, arguing that equal outcomes for different groups require unequal access to resources such as language support. One could also appeal to democratic process, arguing that policy decisions should be respected if they result from a robust process of civic dialogue. Other possible responses to the larger debate about support for indigenous culture include proposals for self-governance for the indigenous group; support for "white," non-indigenous people to help them adjust to their loss of social supremacy; mobilisation of civil society rather than public policy to work out an accepted place for indigenous languages and related cultural practices; and reliance on universal principles of tolerance and non-discrimination combined with welfare state programmes to ensure fair treatment of indigenous peoples.

All of these alternatives flow from the theories reviewed in this book, and I strongly encourage anyone with an interest in issues of ethnicity and population diversity to take the *EIPP* tour. The journey is well worth the ticket price for the many conceptual and analytical insights that Bromell, as tour guide, highlights along the way. With respect to overall conclusions, however, I found the book less than satisfying in several ways. The conclusions are sprinkled around the last chapter, which forces the reader to work rather hard to piece them together into a coherent normative narrative. More importantly, once pieced together, the conclusions aren't supported by the body of the book; they sneak up on the reader without adequate preparation. All of the main conclusions fall on one side of the standard debate between classical liberalism and liberal multiculturalism—endorsing the priority of the right over the good, rejecting government-sponsored multiculturalism, taking a largely ahistorical approach to disadvantage, and promoting a combination of deliberative democracy and support for an egalitarian welfare state as the best formula for social peace.

This one-sided approach diverges starkly from Bromell's admirably balanced approach in chapters 3 to 9, in which he carefully and respectfully considers both the strengths and weaknesses of a wide range of views. I came away from chapters 3 to 9 yearning for a new, more sophisticated filtering and synthesis of the main principles encountered there, because it seemed clear that none of the theories, taken alone, could bear the weight and complexity of the policy challenges. All of the theories were flawed and incomplete; all were in need of better answers to their critics. How, then, could the author so willingly throw his support behind what is mainly a New Zealand version of Barry's egalitarian liberalism? In chapter 10 Bromell never fully addresses what he himself calls (after Fukuyama) the "hole in the political theory underlying liberal democracy" where group identities and dynamics should

be (p. 17). Like others before him, he rather glibly suggests that contrary views can be adequately acknowledged in the course of democratic deliberation and policy making, but doesn't entertain the possibility that deliberative democracy may produce some illiberal policy choices. Thus, there seems to be a missing middle to the book's overall argument. No matter how sympathetic a reader may be to Bromell's conclusions (and I am very sympathetic), the leap from chapters 3 to 9 to the conclusions in chapter 10 is simply too great.

Therein lies *EIPP*'s missed opportunity. Although the implications of selected theories for New Zealand's particularities are discussed throughout, Bromell never goes as far as I think he could towards developing a distinctive, New Zealand-inspired critique and synthesis of contemporary multiculturalist and anti-multiculturalist doctrines. In other words, he doesn't fully employ the intellectual and experiential resources available in New Zealand to bridge the gap between the international literature review and the policy conclusions. Perhaps I am asking too much from a book that aims to inform debate, not craft new theory. If so, then I would like to encourage a sequel that starts where *EIPP* leaves off and then pushes harder towards a New Zealand-based contribution to liberal theory.

Such a sequel could draw upon local norms, practices, and experiences such as New Zealanders' historically high comfort levels with activist government as well as their fierce protection of privacy. *EIPP* discusses the Waitangi Tribunal as an institution for (re)distributing property and group recognition, and touches on the process of public apology, but there is far more to say about the Treaty claims process as a vehicle for truth telling, history writing, and restorative justice. This latter function, which reflects less familiar parts of liberalism's Judaeo-Christian tradition—namely, repentance, forgiveness, and reconciliation -- is conspicuously absent from Bromell's catalogue of multiculturalism-related public policy options (pp. 10–11). New Zealand's international reputation for leadership in restorative justice practices offers a fresh perspective on issues of public policy and population diversity.

Another theme ripe for the *EIPP* sequel is the fact that New Zealand's levels of population diversity, though high now, have emerged only very recently by international standards. The unusual degree of homogeneity that existed here just a few decades ago may continue to shape current attitudes—for example, by creating an allure of excitement and adventure around diversity's arrival and its showdown with social uniformity (but beware the trap of “exhibitory multiculturalism” [p. 225]). New Zealand's village-style social norms and fewer degrees of separation also may provide the type of bonding social capital from which Kiwis can draw the confidence to build bridging social capital with newcomers. In other words, multicultural cosmopolitanism generated “in the relatively confined social and professional milieu of New Zealand” (p. 3) will no doubt generate a differently inflected “togetherness of strangers” (p. 204) than what emerges in Paris, London, or New York. And this surely has important implications for an emerging New Zealand contribution to liberal multicultural theory.

Despite a few disappointments, the last chapter of *EIPP* does reward the careful, patient reader with a series of valuable concluding insights. These may be summarised roughly as follows. Population heterogeneity is an unavoidable and irreversible fact of contemporary life. Although many societies don't like to admit it, group-based characteristics such as race and ethnicity often structure people's life chances in both “subtle and unsubtle” (p. 299) ways

and, therefore, play a key role in generating real social and economic inequalities, which also tend to accumulate over time. Cultural diversity also enriches society, especially when people from different cultures can interact in ways that help each of us to step back and evaluate our own cultural habits and moral assumptions from a broader and less parochial vantage point. Although group-differentiated public policies seem like natural responses to these facts, governments need to remember that group-based policies run the risk of entrenching group-based differences within a social structure, stirring competition and conflict between groups, and eroding national solidarity. To the extent that public sponsorship of multiculturalism signals government's embrace of a particular common good (a debatable premise), Bromell objects, for he is "dubious about the project of defining and promoting a 'common good'" (p. 304). Not only will such a project "tend to be homogenising and to entrench the values and position of the dominant culture", but it also "can become nostalgic and chauvinistic and less than hospitable to dissenters and to recognised difference" (p. 304). For the same reasons, he sees "little benefit, and some risk of harm, in attempts to define a national character, let alone characteristics of 'real Kiwis'" (p. 301).

Alongside these philosophical risks, Bromell sees massive practical barriers to group-based policies, as pointed out by various theorists reviewed in *EIPP*. Practical problems include: defining who qualifies as an authentic group member; adapting to natural changes in groups' self-identities over time; accommodating the fact that most people maintain multiple, hybrid, overlapping, and shifting group identities; and acknowledging that ethnicity can be a weak proxy for disadvantage where need-oriented policies are concerned. In addition, Bromell endorses the scholarly consensus that neither theory nor policy should ossify groups or their cultural beliefs and practices. Nor should vulnerable individuals within a group be put at risk of harm from bad collective decisions, or individuals be encouraged to claim group identity for the sole purpose of securing special rights.

The long list of risks associated with common-good-chasing, national-identity-endorsing, group-based public policies leads Bromell to dismiss the more aggressive forms of state multiculturalism discussed in the book and to define a fairly limited arena for government intervention around population groups. "[P]ublic policy is better focused on reducing inequalities than on recognising identities" (p. 296). More specifically, government's role should include "maintenance of a 'commons'" (p. 304) consisting of publicly provided education, health care, and related institutions and amenities, accompanied by opportunities for deliberative democracy and local self-government, as well as equal access to dispute-resolving processes. According to this view, civil society can fill any vacuum left by a more minimalist government role, thereby allowing more space for people to "work out for ourselves an everyday, lived multiculturalism" (p. 304). Social research should focus on identifying causes and correlates of disadvantage, including "fine-grained analysis of pockets of disadvantage that might enable the targeting of public services on other than broad-brush ethnic categories" (p. 297). Thus, liberalism's hole—its inability to address directly the group-oriented side of human aspiration and flourishing—remains untouched, presumably because the moral and practical risks of explicitly trying to close that hole are too great.

This book is not an easy read, and it would benefit from more concrete examples to illustrate the policy relevance of the theoretical debates. Certain analytical issues deserve more attention, such as the question of an appropriate unit of analysis: Should anyone try to evaluate a whole culture, or should the focus be on particular cultural practices? Nonetheless, *EIPP* is an informative guide to the realities of social and demographic pluralism, and to the

various reasons why states may try to regulate, manage, channel, or liberally ignore those realities. David Bromell has done us all a huge service in filtering, summarising, and interpreting a vast amount of international literature and making it speak to current political and policy dilemmas. He has brought us up to speed on key theoretical developments, demographic trends, and policy debates, and has thus succeeded in his stated goal of giving New Zealanders access to valuable intellectual resources for debating the proper role of ethnicity and other population characteristics in public policy. Looking ahead, *EIPP* also lays the foundation for New Zealand-inspired contributions to both the theory and practice of egalitarian liberalism. I look forward to the sequel.

REFERENCE

- Liu, J. (2007) "Multiculturalism and biculturalism in New Zealand: promises and regrets" PowerPoint presentation for the *Bananas New Zealand Going Global Conference*, Auckland, 18-19 August, www.goingbananas.org.nz/papers_2007.php [accessed 30/1/09].
- Peters, W. (2002) "Dependence day" speech as New Zealand First Party Chairman, 4 July, www.nzfirst.org.nz/content/display_item.php?t=1&i=18 [accessed 30/1/09].
- Shying, I. (2008) *Postcard from Australia*, www.aussiepete.com/2008/12/real-australia-i-heart-diversity.html [accessed 30/109].

**ETHNICITY, IDENTITY AND PUBLIC POLICY: CRITICAL PERSPECTIVES ON
MULTICULTURALISM BY DAVID BROMELL
INSTITUTE OF POLICY STUDIES, VICTORIA UNIVERSITY OF WELLINGTON,
2008**

Cluny Macpherson
Professor, School of Social & Cultural Studies
Massey University, Albany Campus, Auckland

Ethnicity, Identity and Public Policy: Critical Perspectives on Multiculturalism, by David Bromell, outlines ways in which moral and political philosophy may inform debate on, and policy responses to, the growing ethno-cultural diversity of New Zealand society, and the issues of social cohesion and national identity that arise from the increasing number and range of ethno-cultural groups' competing claims. The book reviews a range of options in the literature to provide the basis for a broader, better-informed and more principled consideration of policy options than currently occurs.

The book's structure works well. For a start, the introduction provides a lexicon for the debate. This is valuable because it sets out and clarifies differences between variant forms of concepts that are routinely used, in both popular and academic debate, as though they have a singular meaning. The book then explores the local historical context and provides a clear argument for addressing the issues of the growing diversity of the New Zealand population and the importance of addressing this in ways that recognise and address the tensions between liberalism, which prioritises individuals' rights, and multiculturalism, which recognises and prioritises the rights of groups.

The book then reviews, in three sections (each with its own introduction), seven authors' contributions to the debate on multiculturalism. The contributions have been selected from debates in nations that share some historical, demographic and political features with New Zealand. The selection acknowledges the fact that normative theory is always "situated" and that theory generated in similar socio-political situations is more likely to provide ideas that can usefully frame the local debate. The first section focuses on two communitarian responses to liberalism: Michael Sandel's "Civic republicanism" and Charles Taylor's "Politics of recognition". The second section focuses on variants of multiculturalism, exemplified in Will Kymlicka's "Multicultural citizenship" and Bhikhu Parekh's "Common citizenship in a multicultural society". The third section explores the critiques of multiculturalism exemplified in the writing of Iris Marion Young's "A politics of difference", Ghassan Hage's, "Against white paranoid nationalism", and Brian Barry's "Egalitarian liberalism". Each chapter focuses on political philosophy, but throughout these, in a series of footnotes, the author signals the local relevance of various points in ways that I found helpful. In the final section, "Diversity, democracy and justice", David Bromell brings together the thinking in a remarkably coherent summary for a topic that is as complex as this is. It is arguably the most important chapter in the book and provides a starting point for what could be an exciting and productive national debate.

This book is both timely and valuable. It is timely because it addresses matters that are becoming increasingly prominent, and urgent, in contemporary society. It is valuable because it outlines a range of theoretical writings that address these issues and systematically spells out both the theoretical and the practical strengths and limitations of each approach. It is also

valuable because it identifies and articulates the consequences of taking these positions and, in so doing, reminds us that there are much more far-reaching consequences than is generally appreciated by those pursuing the “politics of the now”. It reminds us of the risks of opting for personal and policy positions out of a sense of pragmatism, and of overlooking, wittingly or unwittingly, the complex moral and philosophical origins and implications of our positions. It also shows why we should be cautious about adopting normative theory and policy solutions from elsewhere, even where these societies seem to have similar histories and political traditions. While there may be no readily available normative theoretical solution to the issues that we as citizens of this society face, this book makes a powerful argument for accepting the challenge to work towards one.

As a teaching text this is a valuable book. Bromell’s introduction sets out and explains the terminology he proposes to use clearly and sensibly: an essential attribute for any meaningful discussion of a topic that is as fraught with confusion as the fields of ethnicity and identity. He outlines each of the author’s central ideas, and the developments within them, clearly and even-handedly. It is a tribute to Bromell that his personal theoretical predilections do not become apparent throughout this section. Indeed, as the reader discovers in the final chapter, this is because Bromell is unconvinced by any one of the positions in its entirety. He notes that,

Sandel, Taylor, Kymlicka, Parekh, Young, Hage and Barry all have important things to say, and in various ways they correct and complement each other. But the development of a normative theory of diversity, democracy and justice that is adequate in all respects seems to me to be still a work in progress. (p. 274)

This book will work well as a text precisely because it avoids the tendency to be polemical on an issue about which much writing is either polemical or rhetorical. Instead, the book takes a historiographical approach and shows how each of the moral and political philosophies—and, more particularly, their application to the management of ethno-cultural diversity—arose out of perceived weaknesses of those that preceded them. The treatment will appeal to able students who are looking for a deeper analysis and very quickly spot and reject polemics.

Yet, sadly, and despite the valuable contribution this work makes to broadening and deepening debate, it is unlikely that many will read it and take up the challenge Bromell issues. Why then do most of us seem bound to live with the current low level of debate and lack of vision around options for addressing ethno-cultural diversity in our society? Bromell himself recognises that the very issues that make such a debate urgent also present obstacles to the open debate that may allow us to reframe them in more useful ways. Thus, under MMP, politicians succeed not by presenting a vision of more just, more creative alternatives to current strategies, but by “doing the numbers” and cobbling together “solutions” that allow them to gain, and then regain, political power. Some officials who advise politicians may contribute to this situation by choosing to frame options for managing diversity in terms they believe their political masters consider “feasible” or “relevant”, which again narrows the terms of the public debate and the options that are canvassed in national discussions. This book is a notable exception to this process.

The mass media allow politicians to avoid more challenging questions about the bases and implications of their policy decisions. The lack of serious scrutiny of the implications of ethno-cultural diversity in mass media means that the debate rarely finds its way into public

debate. Media coverage of ethnic diversity tends to be driven by “issues of the day” rather than “issues for the future”, and to focus on pragmatic rather than philosophical concerns. The review of media coverage of politicians’ views and policies on ethno-cultural diversity in the 2008 election provides examples of the poverty of serious debate. Much of the media coverage of the Prime Minister’s invitation to the Māori Party to join a National-led coalition focused on the pragmatic and strategic questions: why someone would do something that was, in terms of power, unnecessary. It was disappointing, but not surprising, that the debate rarely got beyond these pragmatic and strategic questions.

But while the implications of ethno-cultural diversity in public may not attract serious scrutiny in national forums, these debates are occurring in other social contexts. In fact, many individuals are too busy addressing these issues in their increasingly ethno-culturally diverse personal and social lives to engage in more general public debates. Bromell points to the importance of New Zealand’s socio-demography and the ways in which this may influence debate about diversity. In our family, as in many others, these debates about ethnic diversity and rights occur as people determine how Samoan, and Pālagi, or Māori or Chinese protocols and beliefs might be incorporated into family weddings, who should make these decisions, and on what basis. These debates and decisions are more important for those involved than national ones because, as those involved note, they will have a profound effect on the new relationships created by increasingly frequent intermarriages, which increasingly complicate their social networks and relations.

These private discussions illustrate another point Bromell makes, which is that ethnicity is only one dimension of personal identity, and its importance and the weight attached to it vary from situation to situation and at different times in people’s lives. The debates about wedding protocols also demonstrate the complexity of issues that seem, on the surface, to be about ethnicity: in fact, they also involve consideration of whether and why gerontocratic or meritocratic principles should determine where power lies; whether and why Christianity or humanism should frame ceremonies; whether and why weddings are primarily public statements about relationships between families or private statements about love between individuals; whether and why parents’ views are more important than those of their children who are marrying; and finally, whether and why various ethno-cultural elements and symbols might be incorporated in a social sequence.

The complexity of these issues is, as Bromell also notes, heightened by the fact that many ethno-cultural “groups” are, as a consequence of migration and intermarriage, increasingly complex and internally differentiated. Attempts to frame debates in terms of rights of “ethno-cultural groups” overlook the significant differentiation within groups and oversimplify the increasing complexity of ethno-cultural realities. In our family, debates about ethno-cultural rights and justice highlight the increasing differentiation within a group. They occur in relation to such issues as whether holding family meetings in Samoan disadvantages New Zealand-born and non-Samoan spouses who do not speak Samoan fluently and therefore cannot participate effectively in discussions and decisions that affect them. Alternatively, would meetings conducted in English then exclude and alienate older, Samoan-born native speakers who have esoteric knowledge that should be considered in decisions? Should meetings be held mid-week, when younger employed people cannot attend, or should they be held on weekends, when church engagements would prevent older people from attending? Should the power of oratory or the force of reason shape the outcomes? In many respects these intra-group debates raise issues that are similar too, and as complex as, those that inter-

group debates raise. Maybe we need to take part in these private debates about ethno-cultural diversity before we can engage in public debates.

David Bromell has provided us with an invaluable text. It alerts us to the importance of addressing the issues that arise from our growing national ethnic diversity more critically than is presently the case. It outlines a series of models that have been devised to address these issues elsewhere, and then explores how these may, and may not, help to frame a broader and better-informed New Zealand debate and policy options. The challenge to those who read this text will be to move this debate from the personal to the national sphere.

***SIMPLE, EFFECTIVE AND (RELATIVELY) INEXPENSIVE: NEW ZEALAND
RETIREMENT PROVISION IN THE INTERNATIONAL CONTEXT***

Geoff Rashbrooke
Principal Analyst
Ministry of Social Development

Abstract

The introduction of the defined contribution KiwiSaver scheme into the New Zealand retirement income policy landscape has caused some expressions of concern, particularly in the light of the associated government subsidies. This paper looks at the combination of KiwiSaver and the existing flat-rate universal NZ Superannuation in the context of international retirement income provision. It explores the rationale of KiwiSaver in terms of anticipated outcomes in combination with NZ Superannuation, and makes a case that New Zealand is well positioned compared to other countries, in terms of simplicity, effectiveness and cost.

INTRODUCTION

Issues of pension reform are being discussed in nearly all Organisation for Economic Co-operation and Development (OECD) countries, with population ageing a significant driver.¹ OECD state pensions in the past were generally financed on a pay-as-you-go basis (PAYG²). PAYG financing is particularly susceptible to population ageing, which alters the balance between the numbers of those engaged in the paid workforce and those retired.

On the other hand, full funding of retirement (where member and employer contributions are made to an investment account, and the investment return depends on market conditions and is not usually guaranteed) also presents difficulties, because it too relies on the future workforce producing enough for the consumption needs of the retired, and paper promises can be eroded by inflation. There is an emerging consensus that some mix of PAYG and full funding of retirement provision is likely to be optimal.

Australia is now leading the way, with mandatory, fully funded, defined contribution³ (DC) arrangements supplemented by a residence-based, means-tested age pension. Others – notably Denmark, Hungary, Poland and the Slovak Republic – have moved to include such arrangements as a significant component of their policy. Both voluntary and mandatory occupational DC schemes get state subsidies (usually through the tax system) in a number of countries, with Ireland, Australia, Canada, the United States, Iceland and the United Kingdom (UK) spending the most as a percentage of Gross Domestic Product (GDP), according to OECD data.

¹ For the countries in question, population ageing is driven largely by the decrease in fertility rates in the second half of the last century, combined with the marked decrease in mortality rates that occurred in the first half. Continuing decreases in mortality, or longevity improvement, are an additional component of population ageing.

² Under PAYG, benefits for today's retirees are paid from current tax revenues. Assets are not set aside, although PAYG may coexist with some degree of pre-funding, such as in the NZ Superannuation Fund.

³ Contributions to DC schemes are set as a fixed percentage of wages.

This international interest in pension reform has given rise to a considerable amount of research and analysis. In this paper, New Zealand's state retirement savings arrangements are compared to those of other countries. The criteria applied here are:

- simplicity – how easily is the framework understood, how straightforward is it for people to understand what they will get, and how much administration is required?
- effectiveness – how do the payment outcomes relate to levels of income prior to retirement (replacement rates), and how does the framework affect those who want to stay on in paid work after attaining the pension eligibility age?
- cost – what is the cost as a percentage of GDP?

The two components of the New Zealand retirement policy framework that put money in people's hands at retirement are NZ Superannuation and KiwiSaver. This paper looks at the combination of these components as a whole, including outcomes from NZ Superannuation (current) and KiwiSaver (projected), and compares these with current designs and outcomes in 26 other OECD countries.⁴ Data for the comparisons are taken from OECD and European Union sources.

SIMPLE

NZ Superannuation is generally acknowledged to be the simplest retirement pension set-up in the OECD. There is no means testing, no contributions history to track, and only a fairly basic residential requirement to meet. There are naturally some complications in the machinery, such as the interface with social security pensions from overseas and the annual adjustment process, but by and large the overriding principle – that New Zealanders in retirement should have enough income to belong to and participate in their society – is straightforward, and its current expression as “65 at 65” is eminently comprehensible.⁵

Other OECD countries generally have a minimum pension for the old, but set at a poverty alleviation level, and it is usually means tested. The primary state pension is frequently earnings related to a greater or lesser degree, and even where it is a flat rate, the full rate is payable only where there is a full contribution history. It can be difficult for people to ascertain their likely entitlements; the UK's Basic Pension plus State Second pension plus Pension Credit is especially complicated as a case in point.

The design concept of KiwiSaver is also simple. Contributions of 2%, 4% or 8% of salary to the scheme are deducted from employee earnings, an employer contribution of 2% of salary is added, and these are transmitted through the tax collection system to providers to accumulate to a lump sum available from age 65 or later to supplement NZ Superannuation.⁶

It is true that KiwiSaver could have been made simpler. For example, making it compulsory rather than using auto-enrolment would have removed the complexity inherent in the opt-out and opt-in choices. Having a maximum of, say, three providers with only four (or perhaps

⁴ South Korea, Mexico and Turkey are excluded because their pension systems have relatively low coverage as yet compared to the other OECD countries, and hence their costs as a percentage of GDP are relatively low.

⁵ “65 at 65” is the shorthand for the legislated net-of-tax payment to a qualifying married couple of 65% of the net-of-tax average wage (32.5% each), payable from age 65 (subject to 10 years of residency in New Zealand, including five years after attaining age 50). At the time of writing this has become “66 at 65”, since there is effective bipartisan agreement to have the net married couple rate no less than 66% of net average wage.

⁶ There is scope for the self-employed and others to make voluntary contributions, although these do not attract an employer contribution.

even fewer) investment choices would also have made things much simpler. And open competition among providers is adversely affected by the present inability to compare their charges in an easily comprehensible fashion. There have also proved to be some difficulties in conveying how it works in practice. The capped subsidy is misnamed as a “tax credit”, which does not assist comprehension. Transition arrangements for existing superannuation schemes have also added to the complexity.

The preferred policy, however, was to give New Zealanders as much choice as possible. With the benefit of an established and well-respected source of financial information in the form of the Retirement Commission, allowing choice can be seen as not unreasonable, particularly as having to make KiwiSaver decisions may lead to greater interest in financial matters generally, and hence to an improvement overall in financial capability. In any case, one should not confuse the problems that need to be worked through in introducing KiwiSaver with the simplicity of its intent. One may reasonably expect a growing general comprehension of what the scheme will provide on retirement, and of its basic principle that what you put in is what, with investment returns, you get out.

KiwiSaver is no more complicated than any other fully funded DC scheme within the OECD, with the possible exception of Mexico, where there are no tax subsidies. The problems of provider fee comparisons are a source of complaint in many jurisdictions. And the collection of KiwiSaver contributions through the tax system is a big plus, offsetting, at least to some extent, the fragmentation (and hence lack of economy of scale) resulting from having 30-plus providers in what is not a large market.

A similar auto-enrolment arrangement to KiwiSaver is proposed for the UK. This implementation will have a centralised administration system, which is simpler to the New Zealand approach but is otherwise comparable, and is likely to have more awkward transition issues to deal with because the UK has much greater existing coverage by occupational pension schemes.

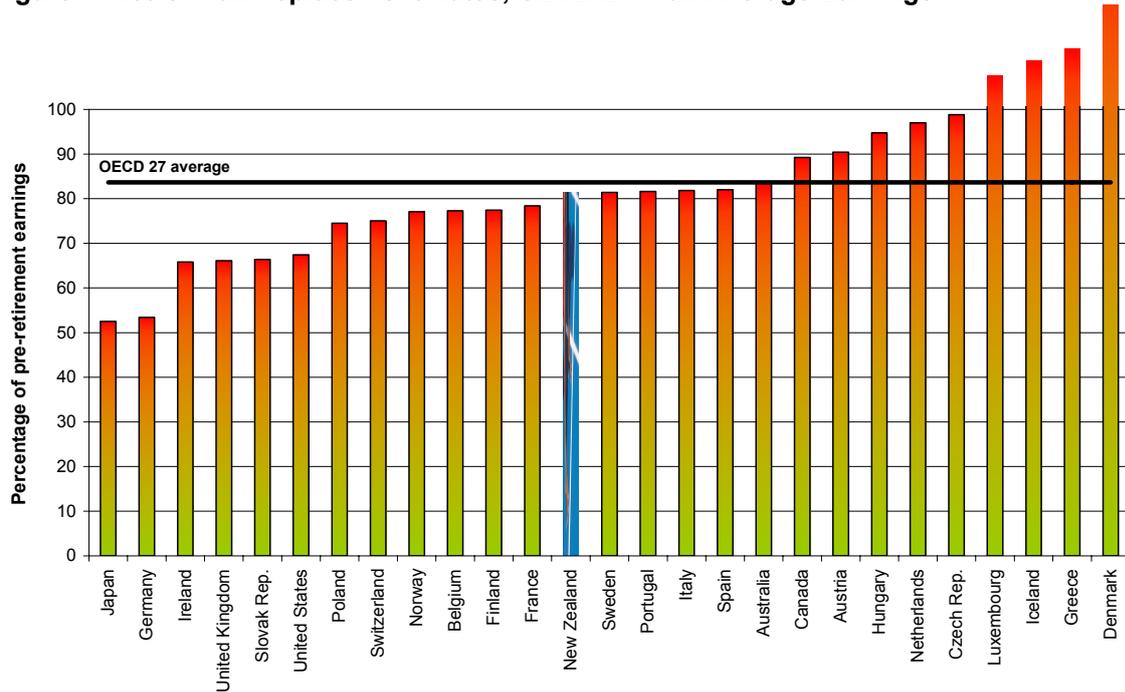
EFFECTIVE

Effectiveness is primarily judged here by replacement rates at different levels of lifetime income, using the results from *Pensions at a Glance 2007*. This OECD publication is widely used as a reference tool for comparing countries’ pension systems. Net-of-tax replacement rates are shown; that is, the ratio of after-tax income from the state system to after-tax income while in employment.

Conventionally, a replacement rate of 65–70% of pre-retirement earnings is considered an appropriate target to aim for in order to maintain living standards into retirement. By then mortgages should be paid off, savings for retirement all made, and work-related expenditures (such as transport) no longer applicable. Importantly, a higher level may be necessary for those on lower incomes, who are more likely to be renting and who are less likely to have been making savings for retirement.

Figure 1 shows replacement rates for a single person earning half the average earnings over a full lifetime of work. The results assume a full working lifetime, so in many countries the outcomes shown will be higher than would apply were a person to have had periods out of the workforce.

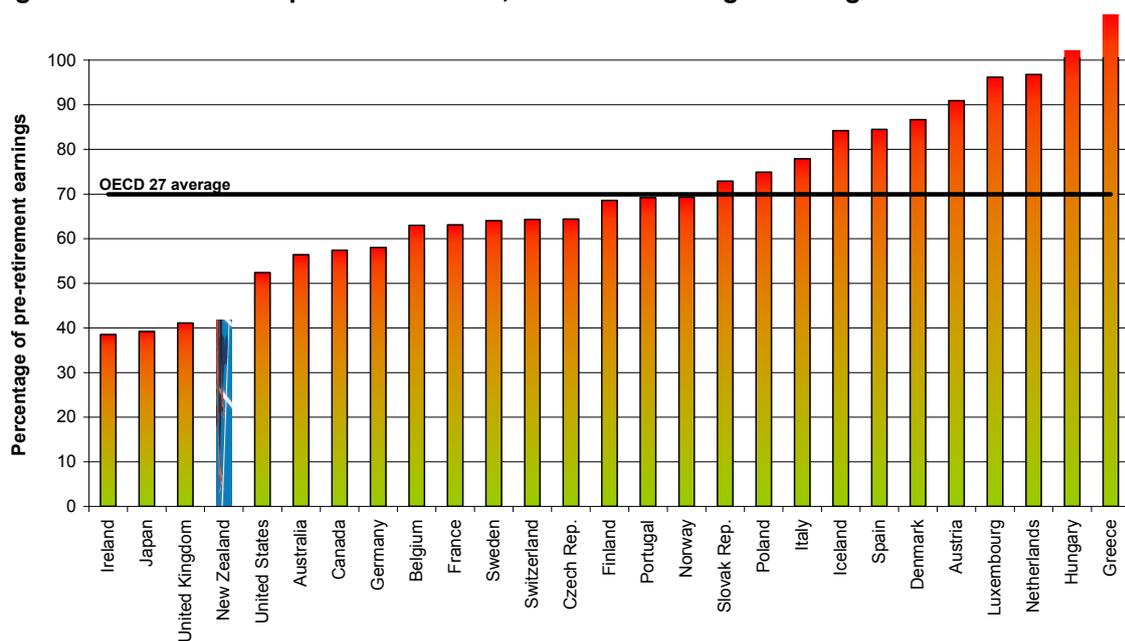
Figure 1 Net-Of-Tax Replacement Rates, OECD 27: Half Average Earnings



The average replacement rate shown here, of around 84%, is not necessarily that high when it is remembered that people who have spent their lifetime on half the average wage are unlikely to have other financial resources.

It can be seen from Figure 1 that New Zealand comes out about average in this comparison. However, since, as noted above, most countries require a full working lifetime for full benefits whereas entitlement in New Zealand depends only on 10 years' residency, our results are almost certainly better than average once those with partial workforce participation are factored in.

Figure 2 Net-Of-Tax Replacement Rates, OECD 27: Average Earnings

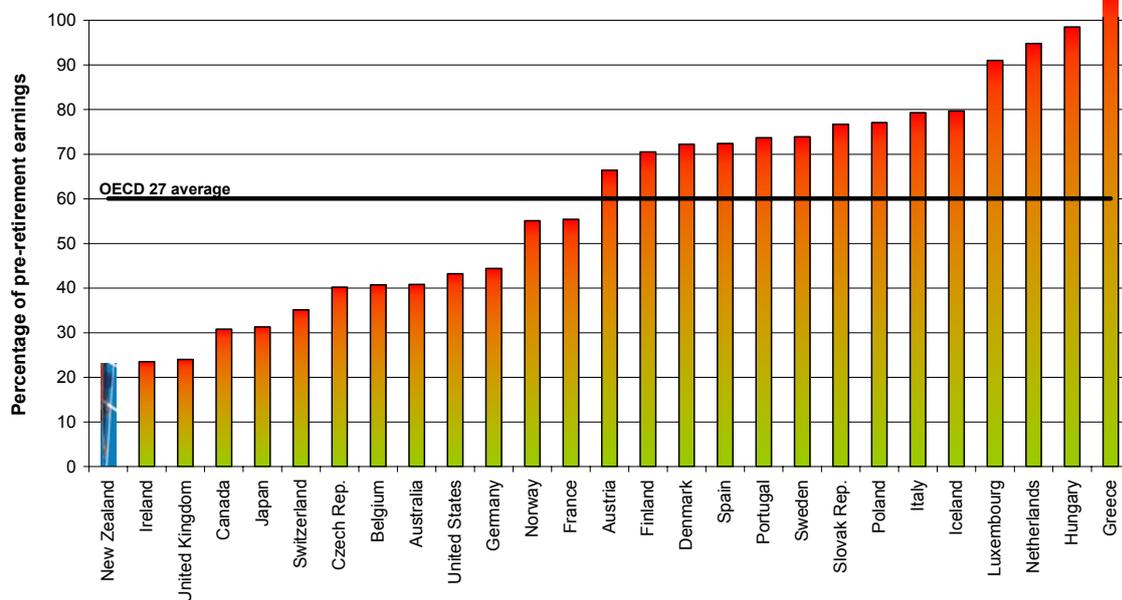


By contrast, Figure 2 shows that for those on average incomes, New Zealand, along with Ireland, Japan and the UK, falls well below the OECD average replacement rate of 70% at this earnings level. Other countries relying on voluntary private savings to boost the state pension include the United States, Australia and Canada, fellow “anglo” countries along with Ireland and the UK; and with New Zealand, clustered near the bottom.

The results for those with double the average earnings over their working lifetime (Figure 3) further emphasise the role expected of voluntary private savings for a number of countries, including the “anglo” group. The New Zealand result is not only marginally the lowest but also a bare third of the average rate of 60% of pre-retirement earnings.

KiwiSaver can thus be seen as the completing piece of the New Zealand retirement policy jigsaw. By facilitating private retirement savings, it should close the gap between what NZ Superannuation provides and average OECD target replacement rates.

Figure 3 Net-Of-Tax Replacement Rates, OECD 27: Twice Average Earnings



Some indicative calculations make this point more clearly, and also bring out some other less-appreciated features of KiwiSaver. Assuming for example:

- net investment return on saving of 5% p.a. after tax and expenses
- nominal earnings growth of 3.5% p.a.
- a kick-start payment of \$1,000
- member contributions of 2%, 4% and 8% of wages up to retirement for those on incomes respectively of \$20,000, \$40,000 and \$80,000 p.a. (corresponding broadly to half average, average and twice average annual earnings)
- a government subsidy equal to member contributions capped at \$20 per week
- employer contributions of 2% of member wages

one can calculate the accumulation from age 35⁷ to ages 65, 67.5 and 70 in real wage terms, as shown in Table 1.

⁷ Commencement at age 35 is chosen to give some time for mortgage payments and other “life establishment” expenses at younger ages.

Table 1 KiwiSaver Accumulation in Real Wage Terms, from Age 35

Retiring age		65	67.5	70
Earnings	Rate			
\$20,000	0.02	\$46,198	\$50,920	\$55,815
\$40,000	0.04	\$116,196	\$127,443	\$139,030
\$80,000	0.08	\$326,287	\$359,483	\$393,823

Using annuity factors based on:

- New Zealand Life Tables 2005–2007 combined All Male & Female mortality,⁸ allowing for improved longevity by decreasing mortality rates of 1% p.a.
- 2% p.a. interest, to allow for indexing in payment
- a loading of 10% for profit, expenses and contingencies

then the accumulations above can be expressed as lifetime pensions equal to a percentage of present earnings, as shown in Table 2.

Table 2 KiwiSaver Accumulations from Age 35, Converted to Income as a Percentage of Present Earnings

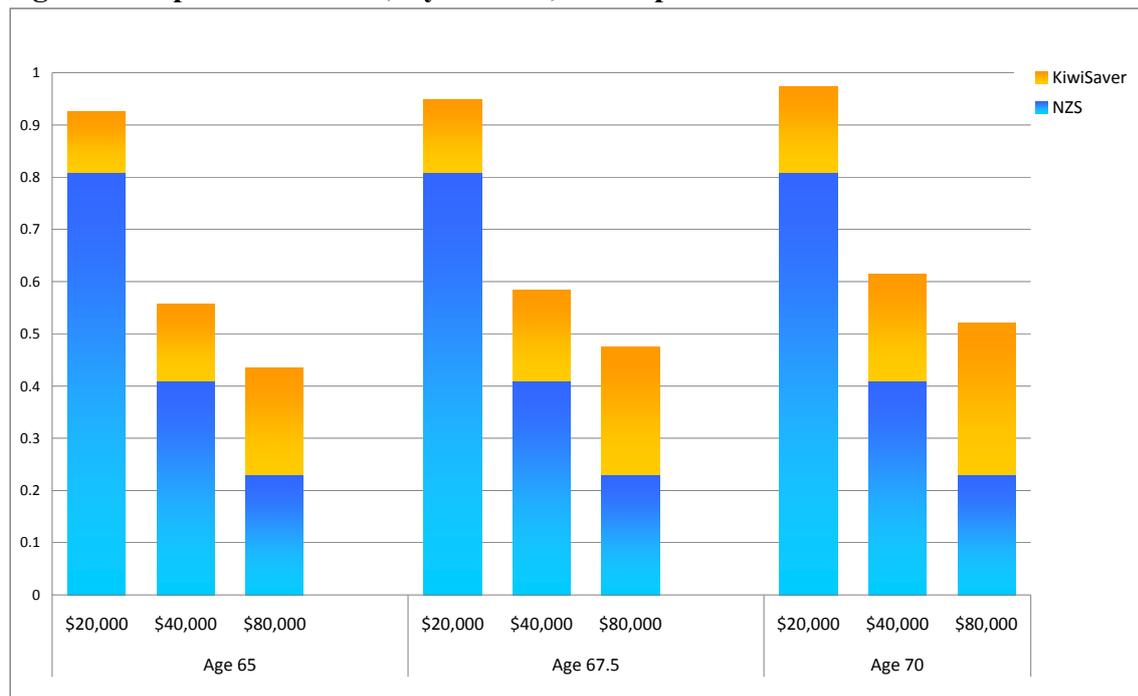
Retiring age		65	67.5	70
Earnings	Rate			
\$20,000	0.02	12%	14%	16%
\$40,000	0.04	15%	17%	21%
\$80,000	0.08	21%	24%	29%

Figure 4 shows the results of combining the net-of-tax NZ Superannuation replacement rates with the above percentages of pre-retirement earnings. The results for retirement at 65, 67.5 and 70 are grouped separately.

The effect for someone retiring at age 65 on average earnings – represented here as \$40,000 p.a. – is to bring the replacement rate up to around 55%. This is still shy of the OECD average of 70%, but is clearly an improvement on NZ Superannuation alone. A person on half average earnings who manages to participate in KiwiSaver is shown as having a replacement rate in excess of 90%. This would not in fact be silly; as noted earlier, it would seem more likely that people with that income background will not be in a position to absorb reductions in their income as they become older. They may in fact not wish to annuitise, as suggested, but instead choose to keep any KiwiSaver savings as a buffer for contingencies, to pay off a mortgage, or to make some investment that will improve their quality of life as they age. Conversely, people on higher earnings will have to save even more than the maximum KiwiSaver 8% contribution – or start sooner – if they want to meet the OECD average for that group of 60% of pre-retirement income.

⁸ Using 2006 population figures as weights.

Figure 4 Replacement Rate, By Income, NZ Superannuation And KiwiSaver



Source: own calculations

The results, assuming working through to 67.5 or 70, show the benefits of a longer accumulation period plus a shorter retirement period. Working a further 2½ years from 65 gives 2–3% additional income, and another 2½ years gives another 4–5%. Given that the trade off in terms of increasing one’s KiwiSaver accumulation to pay for a slightly shorter retirement should be transparent, it may be that KiwiSaver will provide an incentive for those on higher salaries to stay in the workforce – which would be an unintended but positive effect.

More generally, KiwiSaver may enhance retirement planning for all middle and higher income groups provided there is clear information on the enhanced benefits of staying on in work – by publicising age-related annuity rates, for example. Entitlement to NZ Superannuation at age 65 may be seen as a signal to think about retirement. KiwiSaver, on the other hand, may well make the NZ Superannuation eligibility age less important, since unlike NZ Superannuation it will continue to build the longer it is left.

While the desirability of building on NZ Superannuation will generally be accepted, it may be argued that the above process of saving to enhance NZ Superannuation is occurring in any event, and hence that KiwiSaver is an expensive reaction to a non-problem. Proponents of this argument usually rely on published studies that purport to show that many New Zealanders are, in fact, saving adequately for their retirement.

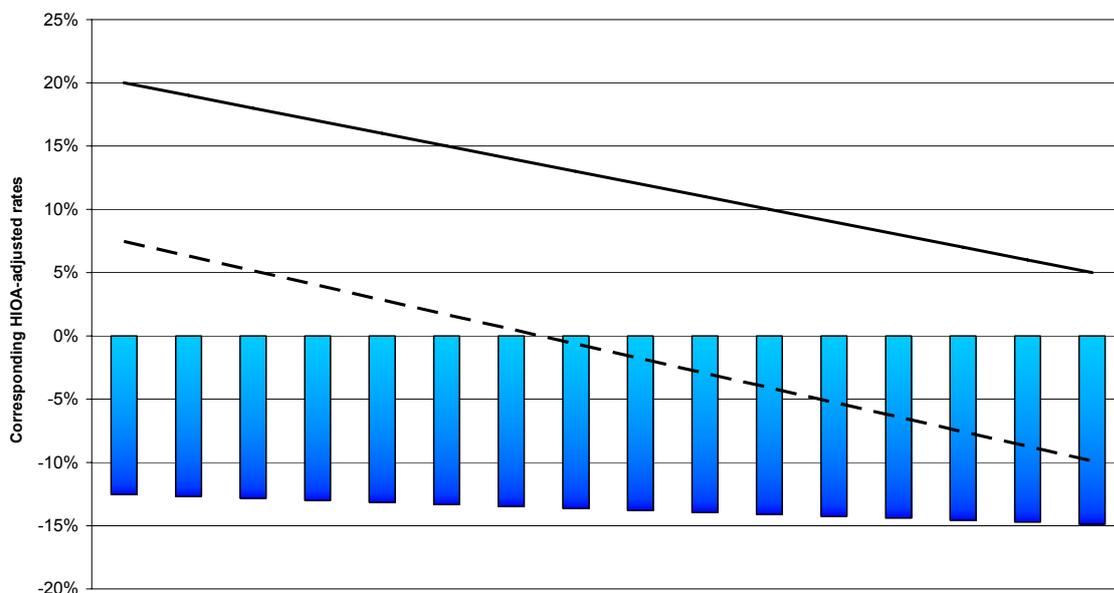
These studies, however, derive rates of saving by reference to the residual between income and expenditure from the Household Economic Survey (HES) carried out every three years by Statistics New Zealand. Such derived rates do not take into account what appears to be significant under-reporting of expenditure. A comparison made by the Government Statistician (Bascand et al. 2006) between the HES and the aggregate-based Household Income and Outlay Account (HIOA) results came to the following conclusions.

- Income in the HES is about 96% of that recorded in the HIOA, whereas expenditure in the HES is about 83% of that recorded in the HIOA.
- Key income items in the HIOA match reasonably well with estimates derived from other independent sources, although there may be some mis-measurement in secondary income flows, such as income from trusts.
- There is no reason to suspect that the HIOA overestimates or underestimates expense items.
- It follows that savings residuals derived from the HES may be significantly biased upwards.

Figure 5 shows the effect of modifying rates based on the HES by the adjustments suggested by the comparison of the HES and HIOA. A savings rate of 20% under the HES would become a little under 8% if the HIOA adjustment is applied; a savings rate of 5% under the HES becomes negative 10%. An HES result of about 13.5% would translate to nil savings. The adjustment by level of purported saving is not constant: the bars show an increasing reduction as the unadjusted savings rate lessens.

The extent of adjustment suggested here is probably excessive: it is unlikely that the adjustments calculated by comparing the aggregate HES and the HIOA data would apply exactly in any given case, and there remain some issues with HIOA as well. Nonetheless, given that Statistics New Zealand warns very strongly against using the HES to derive savings rates as a residual, it is perhaps unfortunate that the studies using HES-derived savings rates did not have much stronger caveats. In any event, it would not appear sensible to say, on the basis of studies done to date, that most New Zealanders were saving adequately for retirement, and safer to develop policy on the basis that HIOA results give a better guide.

Figure 5 Savings Rates: Effect Of HIOA Adjustment On HES-Derived Rates



Another argument sometimes put forward as a criticism of KiwiSaver is that it is regressive; that is, it offers more to the rich than to the poor, since the former are more able to set aside income and enjoy the subsidies than the latter. Considered in isolation this observation is

probably correct. However, when one takes into account the highly redistributive nature of NZ Superannuation, the NZ Superannuation plus KiwiSaver combination makes a lot more sense – still strongly redistributive overall, but moderated by providing something for those on middle and higher incomes.

As with all defined contribution arrangements there are some gender issues with KiwiSaver. These are illustrated by Figure 6, which shows the distribution by age (15 to 64) of average weekly earnings (left-hand side, solid line) and participation in paid work (right-hand side, dashed line), for men and women. Male weekly earnings are consistently higher, in part because more women work part time but also because male hourly rates remain higher. Male participation rates are also higher, largely because females take on greater unpaid caring responsibilities: the fall-off in participation at older ages seems likely to reflect women looking after frail parents, although wives retiring at the same age as husbands may also have some effect as there tends to be an age differential.

This, however, emphasises the importance of the design principle that KiwiSaver is to complement NZ Superannuation, not replace it. New Zealand does rather better for women who need to take time out of the paid work force than most, if not all, other countries.

Figure 6 Distribution of Average Weekly Earnings and Participation in Paid Work, by Age and Sex



Source: NZ Income Survey June 2006 (Statistics NZ 2006)

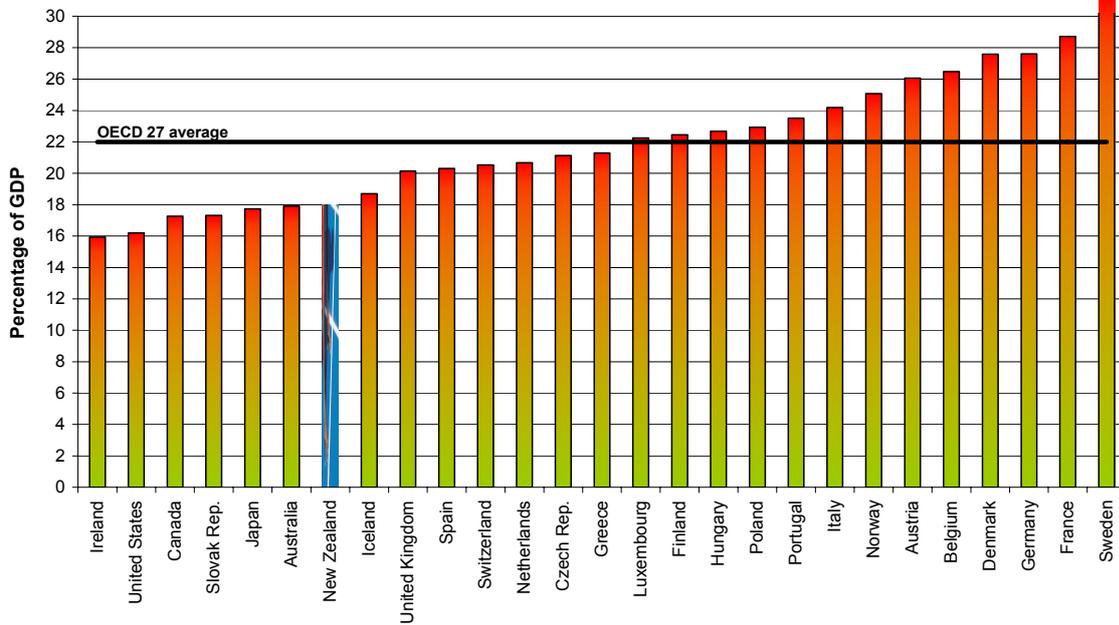
It is not unreasonable to conclude, then, that the combination of NZ Superannuation and KiwiSaver has the potential to be effective in providing retirement incomes that at least bear comparison with OECD results in terms of replacement rates over all earnings levels, rather than just for those with low incomes, while still maintaining the belong-and-participate goal.

(RELATIVELY) INEXPENSIVE

It is all very well to be comparable in outcomes, but what about costs? To put matters in context, Figure 7 shows the expenditure on social security generally for the same OECD

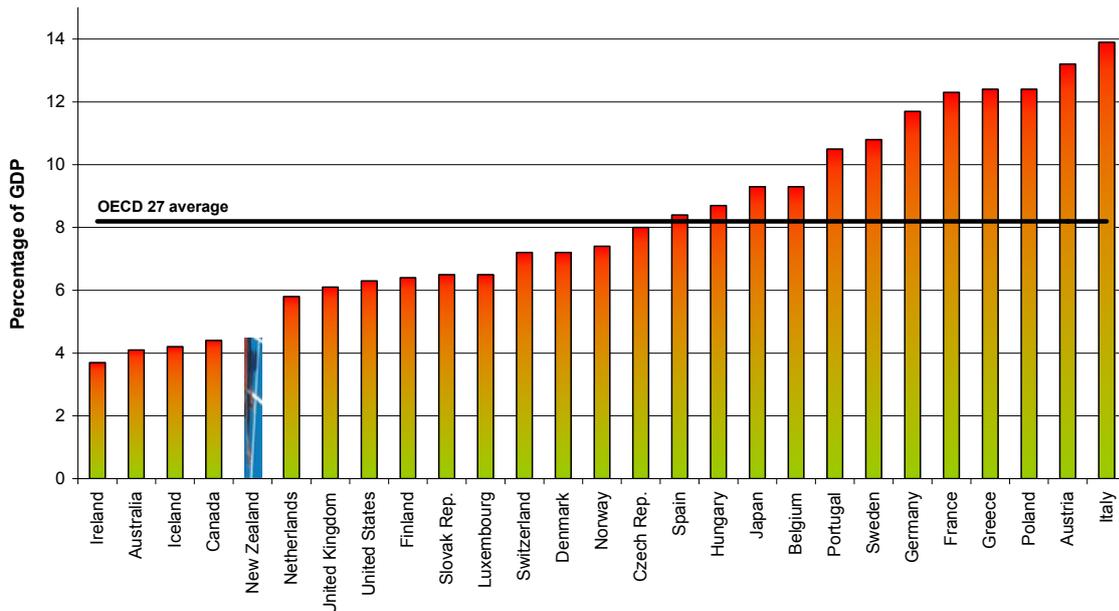
countries as before. From the results reported here it is apparent New Zealand is a moderate spender on social security. Unlike the countries at the right-hand end of the figure, we can be said to have a little headroom, at least at the current time.

Figure 7 Social Security Costs, OECD 27



Turning to the costs of old-age pensions, the New Zealand position looks very reasonable, as Figure 8 shows.

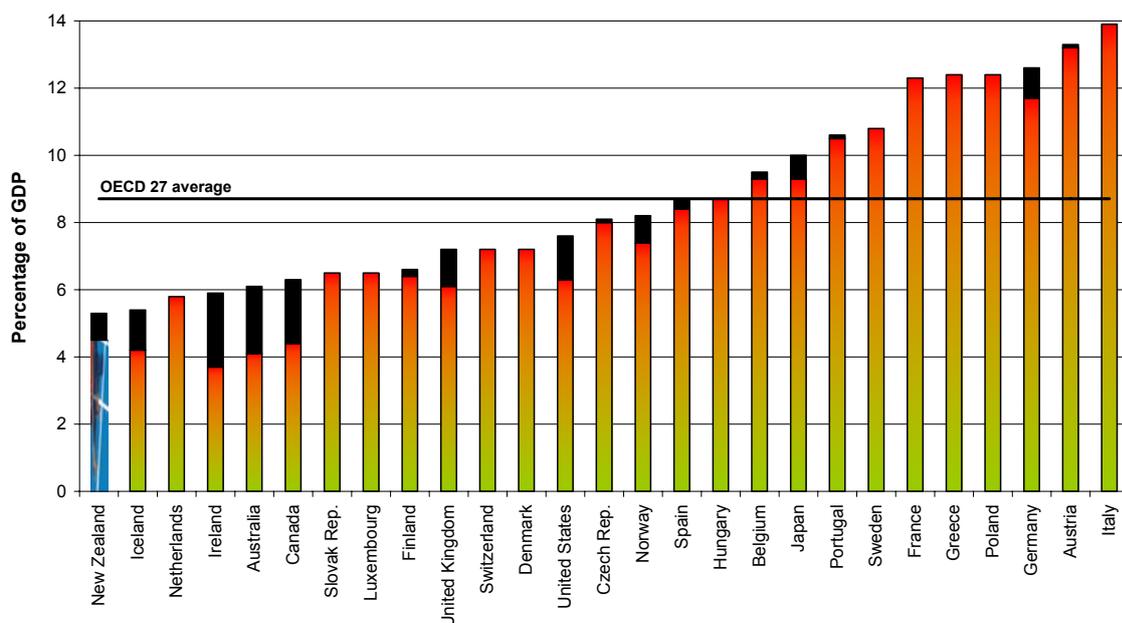
Figure 8 Old-Age Pension Costs, OECD 27



These costs are gross of any tax recoveries, and do not include any pre-funding, such as the capital contribution to the NZ Superannuation Fund. Here New Zealand shows up as one of five countries with a distinctly below-average cost.

The final element is the cost of savings subsidies. Figure 9 has the same data as Figure 8, but the addition represents the costs of tax incentives or other government subsidies.

Figure 9 Old-Age Pension Costs Including Cost Of Savings Subsidies, OECD 27



The data for the cost of savings subsidies come principally from *Society at a Glance* (OECD 2006:79). No figure is provided there for New Zealand, for the obvious reason that at that time we did not subsidise retirement savings. Hence an estimate is needed, and 0.8% of GDP was used, based on the Treasury’s original projected costs of KiwiSaver by 2015. The most recent budget forecast has something rather lower, in the order of 0.4% of GDP.⁹

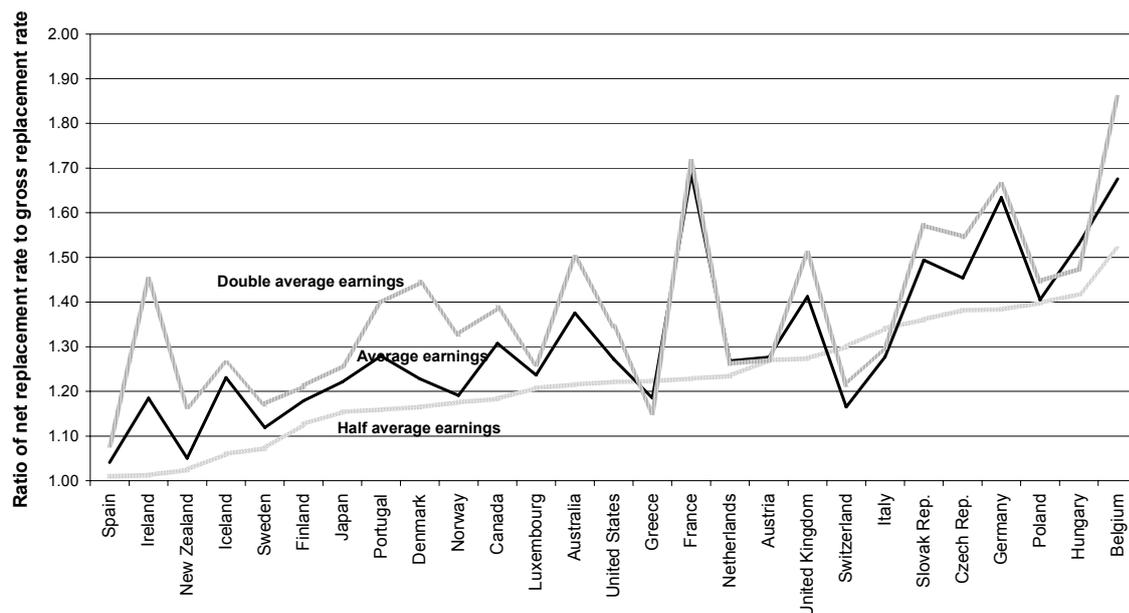
Although New Zealand ranks on this measure as having (marginally) the least expensive form of old-age pension in these countries, this result may be a little misleading. The differences between the bottom few countries are not great, and a few points difference could change their rankings. It is clear, however, that in international terms, even with the addition of KiwiSaver, the New Zealand system is indeed relatively inexpensive.

Some form of subsidy is apparent in all the anglo countries, and also in Germany and Iceland. (Some commentators believe Germany is currently moving towards the anglo model and away from the European approach.) In most of these countries the subsidy increases with earnings, or, if capped, is capped at a much higher level than KiwiSaver. It therefore seems unlikely that New Zealand will move out of the bottom five.

⁹ Data on the costs of NZ Superannuation are derived from the New Zealand Treasury’s Fiscal Strategy Model (FSM) and NZ Superannuation Fund Model projections; see <http://www.treasury.govt.nz/government/fiscalstrategy/model>.

Another aspect of cost is the effect of tax (and social security deductions, where applicable) in the countries surveyed. Figure 10 compares the ratio of the *Pension at a Glance* net and gross replacement rates at half average, average and twice average earnings. Where the ratio is close to 1, the country is taxing pensioners on a similar basis to workers, but as the ratio rises, the country either has a very progressive tax scale at the low end and/or is offering tax concessions and/or social security deduction exemptions to the old. The last two represent an additional cost not captured here.

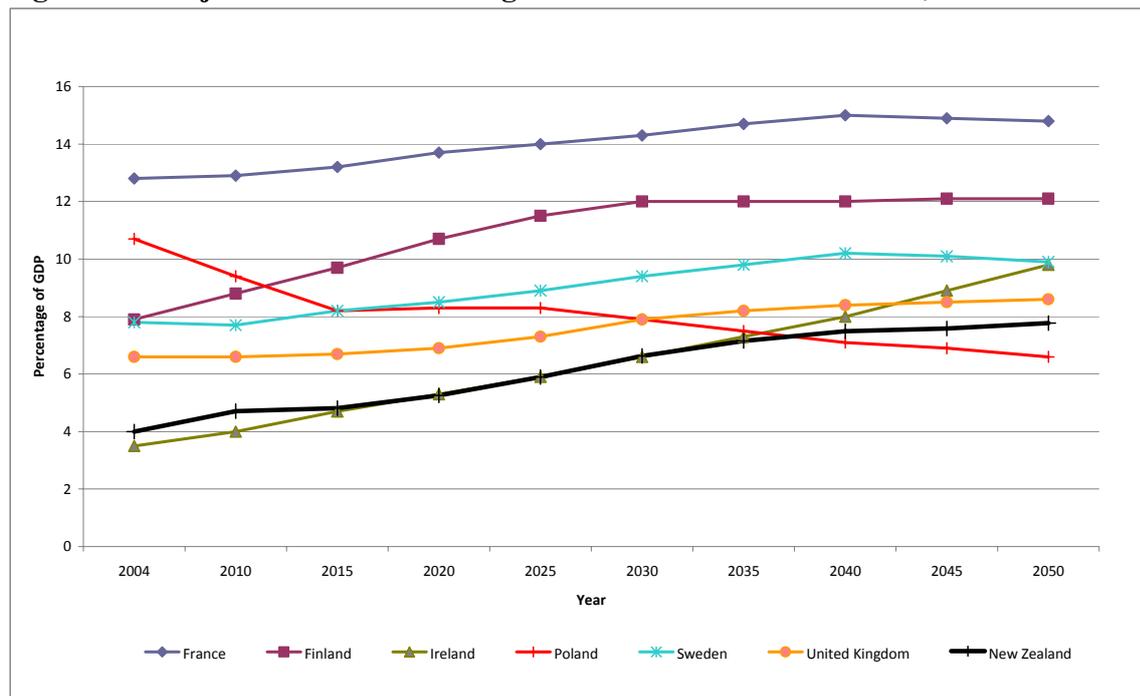
Figure 10 Comparison Net-To-Gross Replacement Ratios at Different Lifetime Earning Levels, OECD 27



The figure is ordered by the results for those on half average earnings, but generally it can be seen that for all three cases New Zealand does not incur a lot of additional cost, whereas many other countries show quite different results. This reinforces the conclusion that the NZ Superannuation plus KiwiSaver combination remains relatively cheap.

The remaining question, of course, is what of the future? Projections for the OECD countries proved difficult to locate at the time of preparing this paper, but the European Union has been producing some useful projections. Figure 11 shows projections for some of those OECD countries also in the EU (which includes the UK and Ireland), with projections for New Zealand added. In this case, the New Zealand data are gross cost taken from the most recent Budget projections, without the NZ Superannuation Fund contributions.

Figure 11 Projected Costs Of Old Age Pension: Selected Countries, 2004-2050



Source: Special Report No. 1/2006 European Commission Directorate-General for Economic and Financial Affairs, plus NZ Fiscal Strategy Model (EPC and EC DG ECFIN 2006)

The figures for Ireland (triangles) are similar to those for New Zealand up until 2035, but the NZ Superannuation cost then flattens out more than the Irish system cost does, and does not go over 8% of GDP. The UK result (circles) is above the New Zealand result, but there is some convergence. Generally these projections show increasing costs flattening out. The exception is Poland, which has introduced fully funded defined contribution schemes, the costs of which are not reflected in these data.

CONCLUSION

NZ Superannuation is simple. KiwiSaver is rather less so, but nonetheless no more intrinsically complicated than voluntary private savings schemes encouraged in some places and compulsory ones mandated in others – and having both PAYG and fully funded approaches operating together is now seen as optimal. The auto-enrolment method adopted for KiwiSaver is arguably more complicated than either the voluntary or compulsory approaches, but preserves an element of choice seen as highly desirable.

The combination of NZ Superannuation and KiwiSaver is effective, or potentially so. NZ Superannuation alone does not produce replacement rates for middle and upper income earners that are commensurate with OECD averages, but KiwiSaver offers the opportunity to fill the gap, as well as providing a buffer against life shocks for those on lower incomes. KiwiSaver may also make more transparent what is actually being set aside for retirement, and provide a mechanism for people to make up shortfalls and trade off longer careers against a higher standard of living in retirement. The combination of KiwiSaver and NZ Superannuation also appears to be one of the least expensive of any of the OECD arrangements, while being effective – particularly for low-income earners. Long-term projections for the EU do not show this position changing.

While this is all very positive, some caveats are needed. First, the country data referred to may not always be strictly comparable, despite the best efforts of the OECD and EU; it is also based on the position in 2003 or 2004, because it takes some time for collection, checking and publication.

Second, all countries have to prioritise spending under the pressure of competing needs. Health costs are an obvious example, with the scope for medical services to enhance wellbeing outstripping the ability to deliver them to all citizens. New Zealand clearly has more headroom than most, but may still have to think carefully about whether there are savings that could be made further down the track.

Third, intergenerational issues have not had a great deal of attention in New Zealand. The generations coming into retirement – let alone those already there – have been advantaged by being able to support NZ Superannuation from a much wider base (relative to recipients) than will increasingly be the case over the next three decades. It follows that changing demography and social conditions may bring about circumstances in which parametric change to NZ Superannuation and/or a review of KiwiSaver rules will obtain some strong degree of consensus. Can one envisage a time when “68 at 68” would seem eminently sensible, just as “65 at 65” does now?

With those caveats, however, one can put one’s hand on one’s heart and say, “The combination of NZ Superannuation and KiwiSaver, in an international context, forms a design which is simple, effective and (relatively) inexpensive”.

REFERENCES

- Bascand, G., J. Cope and D. Ramsay (2006) “Selected issues in the measurement of New Zealand’s saving(s)” paper presented at the *Reserve Bank of New Zealand Workshop on Saving*, 14 November, Wellington, www.rbnz.govt.nz/research/workshops/14nov06/2895712.pdf [accessed 14/5/08].
- EPC (Economic Policy Committee) and EC DG ECFIN (European Commission Directorate-General for Economic and Financial Affairs) (2006) *The Impact of Ageing on Public Expenditure: Projections for the EU25 Member States on Pensions, Health Care, Long-Term Care, Education and Unemployment Transfers (2004–2050)*, Special report 1/2006, Office for Official Publications of the EC, Luxembourg.
- OECD (2006) *Society at a Glance: OECD Social Indicators 2006 Edition*, Organisation for Economic Co-operation and Development, Paris.
- OECD (2007a) *Pensions at a Glance: Public Policies across OECD Countries*, Organisation for Economic Co-operation and Development, Paris.
- OECD (2007b) *Society at a Glance, 2007 Edition*, Organisation for Economic Co-operation and Development, Paris, www.sourceoecd.org/9789264007123.
- Statistics New Zealand (2006) *NZ Income Survey June 2006*, Statistics New Zealand, Wellington.

THE DISTRIBUTIONAL IMPACT OF KIWISAVER INCENTIVES

John Gibson¹

Chris Hector

Department of Economics

Waikato Management School

The University of Waikato, Hamilton

Trinh Le

New Zealand Institute of Economic Research

Wellington

Abstract

New Zealand's approach to retirement incomes profoundly changed with the recent introduction of KiwiSaver and its associated tax incentives. Previous policy reduced lifetime inequality, but KiwiSaver and its tax incentives will increase future inequality and lead to diverging living standards for the elderly. In this paper we evaluate the distributional effects of these tax incentives along with other impacts of KiwiSaver. Using data from a nationwide survey carried out by the authors, we estimate the value of the equivalent income transfer provided to individuals by the tax incentives for KiwiSaver participation. Concentration curves and inequality decompositions are used to compare the distributive impact of these tax incentives with those for New Zealand Superannuation. Estimates are reported for both initial and lifetime impacts, with the greatest effect on inequality apparent in the lifetime impacts.

INTRODUCTION

New Zealand's distinctive approach to retirement saving profoundly changed on 1 July 2007 with the introduction of KiwiSaver and its associated tax incentives. The previous approach, in place since 1990, provided a non-contributory flat pension to anyone who qualified by virtue of age and residency and then let people supplement that as they saw fit without favouring one particular savings vehicle over another (St John and Willmore 2001). In contrast, many countries also promote a contributory (and often mandatory) savings scheme to supplement the basic pension and voluntary provision. Because the flat pension, NZ Superannuation, is paid to everyone at a standard amount unrelated to previous earnings, it helps to equalise lifetime incomes.² Scobie et al. (2005) show that NZ Superannuation places a floor under the income of retirees, so that even when some fall below a relative poverty line (60% of the median) the poverty gap is negligible. Also, Ginn et al. (2001) describe it as a "women-friendly" pension because there are no earnings-related contributions, so women receive the same payments as men even though their average incomes are lower and they participate in the labour force for fewer years.

¹ Acknowledgements

We are grateful to Michael Littlewood, Grant Scobie, Susan St John, three anonymous referees and seminar audiences at Waikato, Motu and the Korea Institute of Public Finance for helpful comments

Correspondence

Prof. John Gibson, Department of Economics, Waikato Management School, University of Waikato, Private Bag 3105, Hamilton.

² O'Connell (2004) considers NZ Superannuation to be an example of a "citizen's pension" – a basic amount payable to all citizens.

These same features are not present in KiwiSaver, which will lead to diverging living standards for the elderly. Since KiwiSaver is a workplace saving scheme, it will amplify gender, ethnic, educational and other inequalities reflected in earnings and employment variations. Not only will wealth (and retirement income) gaps emerge between members and non-members, the differing levels of member and employer contributions and variation in the performance of KiwiSaver funds will also introduce inequality. While such inequalities might be considered an inherent feature of any saving scheme, they are likely to be compounded by the generous taxpayer incentives provided to KiwiSaver members (Crossan 2007).

The main incentives for KiwiSaver participation are the \$1,000 tax-free contribution on first joining (the “kick-start”), the matching contribution of up to \$20 per week (\$1,043 per year) from the government for members aged over 18,³ and the exemption from Employer Superannuation Contribution Tax (ESCT) for employer contributions up to a maximum of 4% of the employee’s gross pay.⁴ In addition, there is a subsidy for the purchase of a first home of up to \$5,000 (subject to income and house price limits), and a fee subsidy of \$40 per year. From 1 April 2008 employers received a tax credit of up to \$20 per week to (partially) offset the cost of compulsory employer contributions into the accounts of employed KiwiSaver members. These compulsory employer contributions are set to rise one percentage point per year, from 1% of gross pay in 2008 to 4% by 2011. Existing superannuation schemes that become KiwiSaver-compliant can access many of these benefits, including the exemption from ESCT for employer contributions and the matching government contribution of up to \$1,043 per year. The investment income earned within KiwiSaver schemes is also favoured by comparison with equivalent earned income. The highest-paid members had tax on fund earnings capped at 30% from 1 April 2008, which is lower than either of the two higher marginal rates of tax on earned income (33% for pay between \$38,000 and \$60,000 and 39% for pay above \$60,000).⁵

Although KiwiSaver began in July 2007, the various incentives were proposed in two distinct groups, which are often called KiwiSaver I and KiwiSaver II (Crossan 2007). The KiwiSaver I incentives were announced in the May 2005 Budget, and were the \$1,000 kick-start and the

³ Although this is called a tax credit, it has little to do with the tax system except as the source of the revenue for this grant. Thus, individuals who pay no tax can still receive up to \$1,043 per year from the government into their KiwiSaver account if their own contributions match or exceed this level.

⁴ The ESCT was previously known as the Specified Superannuation Contribution Withholding Tax (SSCWT). The basis of the ESCT is that any contribution that an employer makes to a superannuation fund for the benefit of an employee is liable for tax, at rates that depend on the employee’s salary. From 1 October 2008 the ESCT is 12.5% for contributions to employees earning less than \$16,800 per year, 21% for those earning between \$16,800 and \$48,000, and 33% for those earning over \$48,000. So, for example, if an employee earning \$50,000 has an employer who wants to contribute \$3,000 to the employee’s superannuation fund, only \$2,000 would go into the fund and the other \$1,000 would be paid as tax. But for KiwiSaver funds, all of the employer contribution would go into the superannuation and none would be paid as tax (for employer contributions up to an amount equal to the lesser of either the employee’s contribution, or 4% of the employee’s gross salary).

⁵ Note that in early 2009, following a change of government, that:

- the ESCT tax concession was reduced by half
- the required employer contribution is now limited to 2% of pay
- the employer tax credit (effectively a capped subsidy) was removed
- the flat rate fee subsidy was removed.

Also, the new regime for taxation of investment earning on KiwiSaver assets applies to all collective investment vehicles that qualify as a Portfolio Investment Entity (PIE), not just KiwiSaver funds. Many non-KiwiSaver investment funds have adopted this tax treatment. The stated purpose of the PIE regime is to prevent the over taxation of people on lower incomes and to tax investments in PIEs broadly in the same way as direct investments by individuals.

fee subsidy. There was also a design feature, rather than a tax incentive, that all employees beginning a new job were auto-enrolled in KiwiSaver and then could opt out, rather than having the default of not being enrolled and having to opt in. The remaining incentives were announced in the Budget of May 2007 just before the beginning of the scheme, except for the ESCT exemption, which was announced in late 2006.

The original arguments for the KiwiSaver scheme were to: “Encourage a long-term saving habit and asset accumulation by individuals who are not in a position to enjoy standards of living in retirement similar to those in pre-retirement” (Section 3, KiwiSaver Act 2006). Proponents of this intervention appear concerned that many New Zealanders are not saving sufficiently for their own retirement, although this issue remains unsettled.⁶ A related concern that was often highlighted by the Minister of Finance who introduced KiwiSaver is that New Zealand appears to have one of the lowest household savings rates among the developed countries (Cullen 2007), although the evidence for this claim is also controversial.⁷

These tax incentives will have varying impacts on inequality. The effect of the kick-start incentive for joining KiwiSaver and the \$1,043 matching contribution depend on patterns of KiwiSaver membership. If it is mainly the rich who join, then despite the equal and capped nature of these payments, they will raise inequality. Regardless of membership patterns, the exemption from ESCT for employer contributions will increase inequality; because this is capped as a percentage of salary rather than a dollar amount, higher earners benefit more from this incentive than lower earners (while non-earners and the self-employed do not benefit at all). Over time the ESCT exemption will become the most important source of inequality, since it provides open-ended benefits every year until retirement, while the kick-start benefit is a one-off and the matching government contribution is capped. Finally, growing KiwiSaver balances for the more highly paid will be favoured by the concessionary tax treatment of investment income. Hence, any tendency for KiwiSaver incentives to contribute to inequality can be expected to increase over time as compulsory employer contributions increase each year from 1% of pay in 2008 to 4% in 2011.⁸

These likely effects on inequality should not be surprising. New Zealand experimented with tax-favoured saving schemes over two decades ago. These were found wanting because they encouraged shifts from non-tax-favoured saving into tax-favoured saving, with little evidence that saving actually improved overall, but with a large hidden cost to the Government in tax forgone that reduced public saving (St John 2006). Moreover, Treasury at the time found that tax incentives largely favoured the better off, who can use tax-favoured schemes to avoid

⁶ Research using the assets and liability module from wave 2 of the Survey of Family, Income and Employment (SoFIE) suggests that most of the pre-retirement population (aged 45–64) has made adequate provision for retirement, especially among the lower-income groups, where NZ Superannuation represents the majority of their retirement income (Le et al. 2007).

⁷ See Le 2007 for discussion of the data problems that affect the interpretation of household saving rates for New Zealand, and Whitehead 2007 for arguments in favour of a more pro-saving set of policies.

⁸ The effect of the tax credit to employers is harder to evaluate, because its incidence, and the incidence of the implicit payroll tax in the form of compulsory employer contributions to KiwiSaver accounts, depends on the supply and demand elasticities in the labour market. Changes introduced in September 2008 in the Employment Relations (Breaks and Infant Feeding and Other Matters) Amendment Act prevent employers from paying a lower salary to KiwiSaver members because the employer has taken the compulsory employer contribution into account. Consequently, according to Littlewood (2008), “those who cannot afford to join KiwiSaver are now to be materially worse off with respect to total remuneration from their employer than their otherwise equivalent colleagues [who join KiwiSaver]”. This is an additional layer of inequality on top of that due to the tax incentives analysed in the current study.

higher tax rates and who save the most anyway. Consequently, this previous experiment with tax breaks for saving schemes was ended in 1987.

Although a comprehensive evaluation of KiwiSaver is planned, it may be several years before standard data sources show impacts on inequality. The Survey of Family, Income and Employment (SoFIE) would be a natural source for such analysis, given that it collects information on financial assets like retirement savings schemes every second year (the even-numbered waves), and also allows for a wide variety of distributional analyses based on demographic and economic characteristics. However, wave 6 of SoFIE went into the field in October 2007 without any questions on KiwiSaver, so it will not be until wave 8 in 2009/10 when the necessary data are collected.⁹ The processing lags in accessing SoFIE data make it likely that independent analyses will have to wait until after 2011. By that year, the annual fiscal costs of KiwiSaver are forecast to be almost \$3 billion (Gibson 2008), which is a very large amount of public expenditure not to be scrutinised, considering that the entire annual cost of NZ Superannuation is just \$8 billion.¹⁰

Therefore, to provide more immediate data to help inform ongoing appraisals of KiwiSaver and its associated tax incentives, we initiated a nationwide KiwiSaver survey in December 2007, which ran until February 2008. Almost 400,000 people had joined KiwiSaver at the time of the survey, and enrolment continued to grow strongly throughout 2008, reaching 716,000 after 12 months and 827,000 by October 2008. Even within the first year, government expenditure of \$1.1 billion was required for KiwiSaver (New Zealand Treasury 2008:116). The unexpectedly high expenses on KiwiSaver were also a contributor to the replacement of government surpluses with forecast deficits in late 2008.¹¹ Hence an evaluation even at this early stage is desirable. A major objective of the survey was to provide information that could be used to estimate the value of the equivalent income transfer provided to individuals by the tax incentives for KiwiSaver participation. In this paper we report on the results of this survey, using tools such as concentration curves and inequality decompositions to compare the distributive impact of these tax incentives with those for NZ Superannuation.

This comparison is not meant to imply that KiwiSaver is necessarily an alternative to NZ Superannuation, since it was designed to work on top of NZ Superannuation rather than instead of it. There are, however, considerable fiscal risks with KiwiSaver and it is possible that future governments could respond to these by adjusting NZ Superannuation rather than KiwiSaver. For example, in just two years, between Budget 2005 and Budget 2007, the forecast mid-term (2016/17) cost of KiwiSaver incentives increased by a factor of 32 due to the introduction of the additional tax incentives in KiwiSaver II (Crossan 2007). Politically it may be difficult to roll back these tax incentives in the future, because a set of entitlements based on individual accounts has been created, whereas it could be easier to adjust NZ Superannuation, which is based on more of an implicit social contract between working-age and retired generations. Moreover, because NZ Superannuation has been the dominant

⁹ Wave 8 is the last wave of SoFIE planned, so there will be no longitudinal information available on KiwiSaver behaviour over time.

¹⁰ This forecast is based on membership increasing at an average rate of 1,000 per day beyond the first year, which accords exactly with the observed growth. The forecast is conservative in not allowing for either the tax-favoured treatment of fund earnings or for wage growth, which increases the costs of the ESCT exemption.

¹¹ According to Table 2.5 of the Pre-Election Economic and Fiscal Update, expense changes due to KiwiSaver costs that were not apparent in the May 2008 budget contribute 7% in 2011 and 10% in 2012 of the replacement of government surpluses (of the operating balance before gains and losses) with deficits (New Zealand Treasury 2008:30).

feature of retirement incomes policy for several decades, it provides an appropriate benchmark for evaluating the inequality effects of an innovation like KiwiSaver.

THE KIWISAVER SURVEY

The data used in this paper are from a nationwide postal survey carried out by the authors between December 2007 and February 2008. A simple random sample was drawn from the New Zealand electoral rolls, at a sampling rate of 1:2,000 for all general electorates. A higher sampling rate, of 1:1,000, was used for the Māori electorates because a sufficient number of respondents was needed to enable estimates of KiwiSaver incidence across different ethnic groups. A total of 1,662 survey forms were sent out, with 604 completed responses. The response rate was 38%, after adjusting for almost 100 cases where forms were not delivered due to changed addresses. A set of sampling weights was derived to account for both non-response and the higher sampling rate from Māori electorates, and all results presented below are weighted to ensure they are nationally representative of the population aged 18 years and above.¹² These sampling weights range from 1,370 to 13,800, with an average value of 4,810.

The survey included questions on knowledge and use of KiwiSaver, the level of contributions that individuals and their employer made to KiwiSaver accounts, and the method of joining (auto-enrolment, direct enrolment, and having an existing saving scheme become KiwiSaver compliant). These details facilitate calculation of the incentives that individuals are eligible for, which vary between KiwiSaver and KiwiSaver-compliant schemes. Demographic and economic details on the respondents were based on questions copied from the Census, with additional questions to capture information on earnings, given that KiwiSaver contributions are mostly based on the level of gross earnings.¹³

Table 1 reports descriptive statistics from the survey for several characteristics of interest, for six sub-groups. The first group is the full sample of those without either KiwiSaver or a KiwiSaver-compliant savings scheme, which also includes people, aged 65 and above who are not eligible for KiwiSaver. The second group is the non-members in the 18–64 years age range. The next three groups are for those who (i) were auto-enrolled in KiwiSaver, (ii) those who enrolled directly via their employer or with a KiwiSaver fund, and (iii) those whose existing saving scheme became KiwiSaver compliant. The last column of the table is for the aggregate of all three of these KiwiSaver or KiwiSaver-compliant membership groups.

¹² Specifically, we grouped responses into 36 cells, based on gender, two ethnicity categories (combining Māori and Pacific Islanders into one group and all other ethnicities into the other), three age groups (18–34, 35–54 and 55 and above) and three income ranges (\$25,000 and below, \$25,001 to \$50,000 and \$50,001 and above). The same grouping was applied to population totals derived from the New Zealand Income Survey, and the ratio of population in each cell to the number of KiwiSaver survey responses in the corresponding cell was used as the sampling weight. Ideally this procedure would have been carried out with the 2006 Census instead of the Income Survey, but the Census introduced the “New Zealander” ethnicity category, which is not comparable with the ethnic groups specified in the KiwiSaver survey. We are grateful to Steven Stillman for assistance with this weighting exercise.

¹³ The survey used the 14 income brackets from the 2006 Census, but the actual median income in each bracket rather than the middle of the range is then used in the calculations. This median is calculated from the 2006 New Zealand Income Survey, which obtains actual income levels rather than income ranges. We are grateful to Steven Stillman for providing these medians.

Table 1 Descriptive Statistics for Various Sub-groups in the Survey

	Non-members		Auto enrolled	Direct enrolled	KiwiSaver compliant	All KiwiSaver
	All ages	18-64				
Age 18-34	0.31 [0.03]	0.39 [0.03]	0.67 [0.12]	0.16 [0.06]	0.29 [0.16]	0.30 [0.06]
Age 35-54	0.38 [0.02]	0.47 [0.03]	0.31 [0.12]	0.51 [0.07]	0.71 [0.16]	0.50 [0.06]
Age 55-64	0.31 [0.02]	0.14 [0.02]	0.02 [0.02]	0.33 [0.06]	0.00 [0.00]	0.20 [0.04]
Male	0.48 [0.02]	0.48 [0.03]	0.51 [0.15]	0.52 [0.07]	0.49 [0.16]	0.52 [0.06]
Māori and Pacific Island	0.14 [0.02]	0.16 [0.02]	0.10 [0.09]	0.14 [0.05]	0.17 [0.15]	0.14 [0.04]
5th Form qualifications or below	0.35 [0.02]	0.29 [0.03]	0.31 [0.14]	0.22 [0.05]	0.07 [0.07]	0.21 [0.05]
6th or 7th Form, trade cert or diploma	0.45 [0.02]	0.49 [0.03]	0.45 [0.15]	0.46 [0.07]	0.56 [0.15]	0.48 [0.06]
Bachelor's degree or higher quals	0.20 [0.02]	0.22 [2.02]	0.24 [0.10]	0.33 [0.06]	0.37 [0.14]	0.32 [0.05]
Home owner	0.69 [0.02]	0.63 [0.03]	0.30 [0.11]	0.77 [0.07]	0.76 [0.15]	0.66 [0.06]
Owner of other property	0.20 [0.02]	0.19 [0.02]	0.04 [0.04]	0.34 [0.06]	0.07 [0.07]	0.24 [0.05]
Income (annual, pre-tax)	33,668 [1,192]	35,930 [1,426]	32,571 [4,367]	46,375 [3,649]	56,754 [11,951]	44,626 [3,091]
Sample size	505	384	16	71	12	99
population	2,463,153 [69,722]	1,968,222 [79,572]	103,948 [30,266]	280,729 [35,733]	58,570 [18,264]	443,247 [48,527]

Note: Standard errors of means in brackets

The survey estimates of KiwiSaver membership compare well with official data. Reports from the Government showed a total of 381,000 KiwiSaver members by the end of December 2007 and 414,000 by late January 2008, not counting those in KiwiSaver-compliant schemes. Approximately 8% of these were under age 18 and so will not show up in a sample based on the electoral rolls.¹⁴ Therefore the relevant age group population is between 352,000 and 382,000, and our survey estimate of this population is 384,700.

The breakdown between types of KiwiSaver members changes over time, making it harder to see how the survey compares with official data. The survey estimate of 280,700 direct enrollees is 2.7 times larger than the estimated number of auto-enrollees, at 103,900. This same breakdown is not publicised monthly when administrative data on total membership are released, but information supplied by the Inland Revenue Department indicates that by the end of December 2007 there had been 183,400 auto-enrollees, of whom 58,000 had opted out, and 255,700 direct enrollees, giving a ratio of direct to auto-enrolled members of just over 2:1, similar to the end of the first full year of KiwiSaver, when direct enrolments were 36% of total net enrolment (Inland Revenue 2008). In contrast, the same ratio in October 2007 had been 3:1,¹⁵ which reflects the fact that the people with the most incentive to join

¹⁴ Based on a report in the Beehive Bulletin of 12/10/07 that 8.6% of members are under age 20.

¹⁵ An Official Information Act request by the New Zealand Institute of Economic Research, with information provided on 4/12/07 for October 2007, shows that by that month there were 62,920 auto enrolled (a further 32,752 had opted out) and 188,816 direct enrolled.

directly would have done so as early as possible in order to maximise their tax incentives. Hence the sample appears to be a reasonable reflection of this changing pattern.

The survey suggests that KiwiSaver members are older than non-members, are less likely to be Māori or Pacific people, but more likely to be male, to hold a degree or higher qualification, and to have higher incomes. Large differences are apparent between direct enrollees and auto-enrollees, with 67% of auto-enrollees below age 35 but only 16% of direct enrollees in this age range. This likely reflects the higher job turnover among the young, raising their auto-enrolment rate. For direct enrolments, older people have an advantage since they can obtain the tax incentives with lower opportunity cost, because they do not have to lock up their own contributions for very many years before cashing in their KiwiSaver accounts at age 65. Substantial income differences are also apparent. While auto-enrollees have annual incomes that are \$3,000 below similarly aged non-members, direct enrollees have annual incomes that are \$10,000 higher and members of KiwiSaver-compliant schemes have annual incomes that are over \$20,000 higher. These income differences between KiwiSaver members and non-members suggest that the KiwiSaver incentives will tend to raise inequality, even for the \$1,000 kick-start and \$1,043 annual government contribution payments, which are capped.

THE INCIDENCE OF KIWISAVER INCENTIVES

One way to consider the incidence of the KiwiSaver incentives is to see what share of the total accrues to various population sub-groups. This is of interest because NZ Superannuation is approximately a “citizen’s pension” – a basic amount payable to all citizens – so is distributed largely according to population shares. It seems appropriate, therefore, to compare the distribution of KiwiSaver incentives to population shares as well. A disaggregation into groups defined by age, gender, ethnicity, education and income is reported in Table 2.

Table 2: Shares of Population and KiwiSaver Incentives Accruing to Various Sub-Groups

Groups	Share of population	Share of First Year Incentive	Share of Lifetime Incentive	Relative shares	
	(a)	(b)	(c)	(b)/(a) (d)	(c)/(a) (e)
<i>Age</i>					
Age 18-34	0.374	0.284	0.462	0.759	1.234
Age 35-54	0.476	0.496	0.467	1.044	0.982
Age 55-64	0.150	0.219	0.071	1.461	0.473
<i>Gender</i>					
Female	0.511	0.432	0.407	0.846	0.798
Male	0.489	0.568	0.593	1.160	1.211
<i>Ethnicity</i>					
Maori and Pacific Island	0.159	0.113	0.101	0.707	0.635
Other ethnic groups	0.841	0.887	0.899	1.056	1.069
<i>Education</i>					
Fifth form qualifications or below	0.279	0.196	0.163	0.703	0.587
6 th or 7 th Form, trade cert or diploma	0.484	0.465	0.455	0.960	0.940
Bachelors degree or higher quals	0.238	0.340	0.381	1.430	1.606
<i>Income Group</i>					
Up to \$30,000	0.456	0.227	0.143	0.499	0.314
\$30,001-\$70,000	0.439	0.600	0.666	1.365	1.515
\$70,001 and above	0.105	0.173	0.191	1.654	1.825

Because only those aged less than 65 are eligible for KiwiSaver, the comparisons are restricted to that group. Separate calculations are made of the incidence of the tax incentives in the first year and their lifetime incidence.¹⁶ In order to calculate this lifetime incidence, we have to estimate present values.¹⁷ Specifically, we calculate the present values of the tax incentives received between 2007 and the year when members who had joined by December 2007 reach age 65.¹⁸

¹⁶ These calculations are just for members who had joined by the time of the survey. Other calculations based on projected membership once 50% of the age-eligible population have joined are reported below.

¹⁷ The present value of an income stream (or any other benefit such as a tax break that is enjoyed over a number of years) is the sum of the present values of each year's income. Because money has time value, the present value of each year's income must be discounted at a rate that compounds with every year further into the future.

¹⁸ To carry out this calculation we combine our survey data with 2006 Census average earnings and employment rates for age, gender and qualification cohorts and with life table data on survival rates for the same cohorts. The expected value of earnings at any future age, a , is then the product of the cohort-specific employment and survival rates and the current earnings of people of age a with the same characteristics, allowing for real income growth at an assumed annual rate of 2% and variation of the respondent's idiosyncratic income from the cohort mean. The value of KiwiSaver contributions is then calculated, based on the assumption that individuals continue contributing at the same rate in the future as they reported in the survey, and that employer contribution rates stay the same if they are already 4% or above, and otherwise increase according to the KiwiSaver legislation, from 1% in 2008 to 4% in 2011. The values of the tax incentives in each year until age 65 are calculated once these member and employer contributions are known, assuming a continuation of the current rules. These predictions of the tax incentives in each year are then converted to a present value assuming a real discount rate of 6%.

The sub-groups who receive a larger share of first-year KiwiSaver incentives than their population share would warrant are those above age 55, males, and especially those with bachelors' degrees or higher qualifications and high-income earners (Table 2, columns (a), (b) and (d)). For example, in the first year of the KiwiSaver scheme, 34% of the value of the incentives is being captured by degree holders and above, despite this group being only 24% of the population. Similarly, 17% of the tax incentives go to those with incomes above \$70,000 despite this group being just 11% of the population. Those with only Fifth Form qualifications or less, females, Māori and Pacific people, and especially those with annual incomes below \$30,000, receive only small shares of the value of KiwiSaver incentives in the first year relative to their population size.

The inequality across population sub-groups in the distribution of KiwiSaver incentives is even more apparent in the lifetime estimates. The highest income group receives over 80% more of the lifetime incentives than their population proportion would predict, while the lowest income group receives less than one-third of their proportionate share (Table 2, column [e]). Similarly, Māori and Pacific people, women and the least educationally qualified group receive an even smaller share of the lifetime value of KiwiSaver incentives than either their share in the first year or their population share would predict. Age is the only characteristic where the incidence patterns vary between the first year and lifetime, since the lifetime calculations give younger KiwiSaver members more time to accumulate incentives. This tendency for the unequal incidence of KiwiSaver incentives to strengthen over time reflects the growing importance of the ESCT exemption as a source of benefit, and the diminishing effect of the one-off \$1,000 kick-start payment over a longer time horizon.

THE IMPACT OF KIWISAVER INCENTIVES ON INEQUALITY

KiwiSaver incentives are unequally distributed, as Table 2 makes clear. So, too, however, are many other rewards in both a market economy and from public transfers. Hence, what matters is how much KiwiSaver incentives contribute to inequality compared with other income sources. We therefore use a decomposition technique, developed by Lerman and Yitzhaki (1985), which shows the contribution of each income source to inequality in total incomes. In this decomposition, each source's contribution to the Gini coefficient for total income is the product of its own inequality (G), its share of total income (S), and its correlation with the rank of total income (R).¹⁹

The results of this decomposition for the first year of KiwiSaver are shown in Table 3. All three of the KiwiSaver incentives considered (the \$1,000 kick-start, the \$1,043 matching contribution and the ESCT exemption) act to increase inequality (based on their positive values for I – the share of inequality due to each source). The most unequally distributed of these three incentives is the ESCT exemption, as seen from its very high Gini coefficient (0.98). Moreover, the ESCT exemption is also the most highly correlated with the rank of total income ($R = 0.84$), showing that this incentive accrues mainly to the rich. In fact, the contribution to inequality from the ESCT exemption is twice its contribution to total income, as seen from the (I/S) ratio of 2.0, which is easily the highest of any income source. The contrast with NZ Superannuation is striking. The correlation of NZ Superannuation with the rank of total income is negative ($R = -0.34$), so NZ Superannuation acts to reduce total inequality, by approximately 5% ($I = -0.05$).

¹⁹ The Gini coefficient is a measure of inequality, which ranges from 0 (perfect equality where all have the same income) to 1 (complete inequality where one person has all the income and everyone else has none).

Table 3: Inequality By Income Source, Annual Income 2007/2008

	Share of total income	Gini coefficient by source	Correlation with rank of total income	Share of income inequality	Relative income inequality
	(S)	(G)	(R)	(I)	(I/S)
Income source					
KiwiSaver Tax Incentives ^a	0.0083	0.8693	0.4421	0.0078	0.9398
\$1000 kick-start	0.0037	0.8676	0.3087	0.0024	0.6486
\$1043/yr tax credit	0.0038	0.8696	0.4866	0.0039	1.0263
ESCT exemption	0.0007	0.9774	0.8419	0.0014	2.0000
New Zealand Super	0.0696	0.8367	-0.3440	-0.0486	-0.6983
Earnings	0.7173	0.5716	0.8749	0.8690	1.2115
Other income	0.2047	0.8047	0.4306	0.1718	0.8393
TOTAL		0.4128			

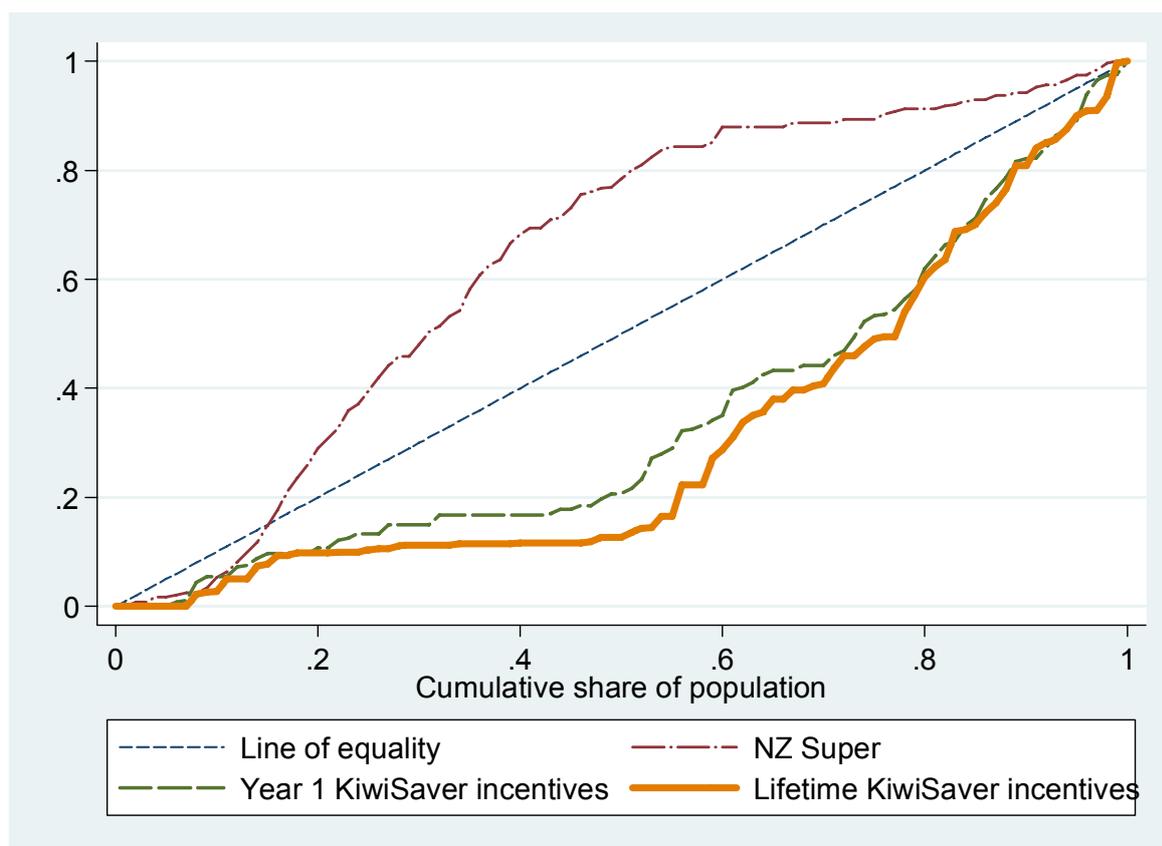
Note: All values weighted by sampling weights, which are the expansion factors needed to gross the sample up to population totals, for the resident New Zealand population age 18 and above.

Income sources with a negative R and I act to reduce overall income inequality.

^a Includes the fee subsidy of \$40 per year.

Because the ESCT exemption will, over time, become a more important source of benefit, while the kick-start benefit is a one off, a longer-term perspective would be likely to find that the overall impact of KiwiSaver incentives on inequality is even greater than what is shown in Table 3. This intuition is confirmed in Figure 1, which compares *concentration curves* for KiwiSaver incentives in the first year and over the lifetime, with the concentration curve for NZ Superannuation. These concentration curves show the cumulative percentage of KiwiSaver incentives (or any transfer) accruing to the poorest $x\%$ of the population. The horizontal axis measures percentiles of income distribution, from poorest to richest, and the vertical axis measures accumulated percentage of total transfers. If everyone, irrespective of income, received exactly the same value of KiwiSaver incentives, the concentration curve would be a 45-degree line from the bottom left-hand corner to the top right-hand corner; this is the *line of equality*. Transfers and income sources with concentration curves above the line of equality (i.e. those with concave curves) reduce inequality; those below the line of equality increase inequality. If one concentration curve is below (more convex than) another, it indicates a more unequal distribution of this transfer or income source.

The concentration curve for the lifetime value of KiwiSaver incentives lies mostly below the concentration curve for the incentives in the first year. For example, the poorest 50% of the population (according to current incomes) receive just 13% of the lifetime value of KiwiSaver incentives (conditional on current membership levels) but over 22% of the incentives in the first year. Hence the KiwiSaver incentives are more unequally distributed in the long run, as also shown in Table 2, and are therefore likely to produce a larger impact on lifetime inequality than the impact in the first year shown in Table 3. The effect of NZS in dampening inequality is also apparent in Figure 1, with the concentration curve for NZ Superannuation being almost everywhere above the line of equality.

Figure 1 Concentration Curves for KiwiSaver Tax Incentives and NZ Superannuation

One potential concern with the results presented thus far is that they may provide a misleading guide to how KiwiSaver incentives will affect inequality once more members have joined. At the time of the survey only about 15% of the relevant age-range population had joined, while government projections allow for either a “high” take-up rate of 65% after 10 years or a “fast” take-up rate of 50% after five years. Perhaps as more people join the impact on inequality is reversed?

To help assess the likely impacts of KiwiSaver incentives on inequality in the future, when there are higher membership rates, we first estimate probit regression models of whether or not a survey respondent is already a member. These models provide predicted probabilities of membership, based on characteristics such as age and income, so that we can then simulate who would be a member in future by assigning the non-members with the highest predicted probabilities into the simulated membership group. Because auto-enrollees and direct enrollees have quite distinct characteristics (younger and poorer for auto-enrollees, versus older and richer for direct enrollees), we estimate separate models for these two membership categories. The results of the two probit models are reported in Table 4, and these show the relevance of young age for auto-enrolment, and high incomes, higher qualifications and older age for direct enrolment.

Table 4: Probit Regression Models Used to Simulate Future Membership of KiwiSaver

	Auto enrolment			Direct enrolment		
	Coefficient ^a	Standard error	P> z ^b	Coefficient ^a	Standard error	P> z ^b
<i>Age</i>						
Age 18-34	ref group					
Age 35-44	-0.018	0.015		0.066	0.052	
Age 45-54	-0.042	0.015	**	0.150	0.063	***
Age 55-64	-0.040	0.012	**	0.307	0.081	***
<i>Gender</i>						
Female	ref group					
Male	0.003	0.017		-0.007	0.028	
<i>Ethnicity</i>						
Māori and Pacific Island	-0.021	0.016		0.016	0.042	
Other ethnic groups	ref group					
<i>Education</i>						
Fifth form qualifications or below ref group	ref group					
6th or 7th Form, trade cert or diploma	-0.024	0.023		0.068	0.034	**
Bachelors degree or higher quals	-0.016	0.019		0.144	0.058	***
<i>Income Group</i>						
Up to \$30,000	ref group					
\$30,001-\$70,000	0.015	0.020		0.073	0.040	**
\$70,001 and above	-0.009	0.018		0.084	0.050	*

Note: Number of observations = 481. The pseudo-R² for the auto enrolment model is 0.10 and for the direct enrolment model is 0.11. The Wald tests for the goodness of fit of the entire model are 12.52 for the auto enrolment model and 38.19 for the direct enrolment model. These are statistically significant at the 0.08 and 0.01 level with 9 degrees of freedom.

^a The coefficients are transformed into marginal effects, showing the effect of a one unit change in the explanatory variable on the probability of being an auto or direct enrolled KiwiSaver member.

^b *** = significant at 0.01, ** = significant at 0.05, * = significant at 0.1.

The predictions from the models in Table 4 are used to simulate a situation that may occur by about the year 2011, by which time 50% of the population may have been enrolled in KiwiSaver (assumed to be split between 20% auto-enrolled and 30% direct enrolled, since the 2.7:1 ratio found in the survey will fall over time). Existing KiwiSaver and KiwiSaver-compliant members are assumed to maintain their current status. We also assume that all of the direct enrollees will have joined prior to the year that is being simulated, since this group will want to enroll as quickly as possible to maximise the value of the tax incentives. One-fifth of the auto-enrollees are assumed to join in the year being simulated, because membership of this group should grow at a declining rate over time.²⁰

The simulation also assumes that existing members and their employers maintain their current KiwiSaver contribution rates, except that where employer contribution rates are below 4% of gross pay, these are raised in line with the schedule set out in the KiwiSaver legislation. The simulated new members are assumed to contribute 4% of their earnings,

²⁰ Although the rate of job turnover may be approximately constant over time, turnover will yield fewer new auto enrolments in future because a rising fraction of people starting new jobs will already have enrolled in KiwiSaver.

which is the same rate as their employer contributes. The other components of income (earnings, NZ Superannuation and other income) are left at the same values used for the calculations reported in Table 3, so that the only factors changing are the expansion in KiwiSaver membership and the mandated rise in the rate of employer contributions.

The results of the inequality decomposition for the simulated situation in a year like 2011 are shown in Table 5. All of the KiwiSaver incentives still increase inequality, even with one-half of the age-eligible population enrolled. In total, the simulated KiwiSaver incentives contribute 1.5% to an annual income total that includes them as equivalent to an income stream, but they contribute 1.8% to the total inequality. In the simulation, the kick-start payment is a relatively minor part of the total incentive package, while the ESCT exemption becomes almost one-third of the total (up from one-twelfth in the first year). This tax exemption is, once again, proportionately, the largest contributor to inequality of any income source considered in Table 5, as seen from its (*I/S*) ratio of 1.6. The impact of KiwiSaver incentives in raising income inequality is therefore likely to be an enduring feature of their design, rather than simply a transitory byproduct that disappears once membership becomes more universal.

One inference some may draw from Table 5, which we would argue is erroneous, is that the contribution to inequality from KiwiSaver incentives is *just* 1.8%. This seems small relative to the contribution from earnings (86.7%) or from other income (16.5%). In fact the correct comparison is with the contribution to inequality from NZ Superannuation (-5.0%). There are two reasons for this. First, earned income in market economies is characteristically unequally distributed and makes the major contribution to overall income inequality. Even a transfer programme as large as NZ Superannuation (equivalent to over 4% of GDP) can only moderate that market inequality by a small amount. Second, both NZ Superannuation and KiwiSaver are retirement incomes policies, so they are natural comparators. It seems somewhat inefficient to have two policies ostensibly targeting the same goal (secure and equitable incomes in retirement) which are having such offsetting effects on income inequality. Thus, in our opinion, the correct inference to take from Table 5 is that over one-third of the inequality reduction achieved by NZ Superannuation might be undone by KiwiSaver incentives.

Table 5: Predicted Inequality By Income Source When One Half of Age Eligible Population are in KiwiSaver

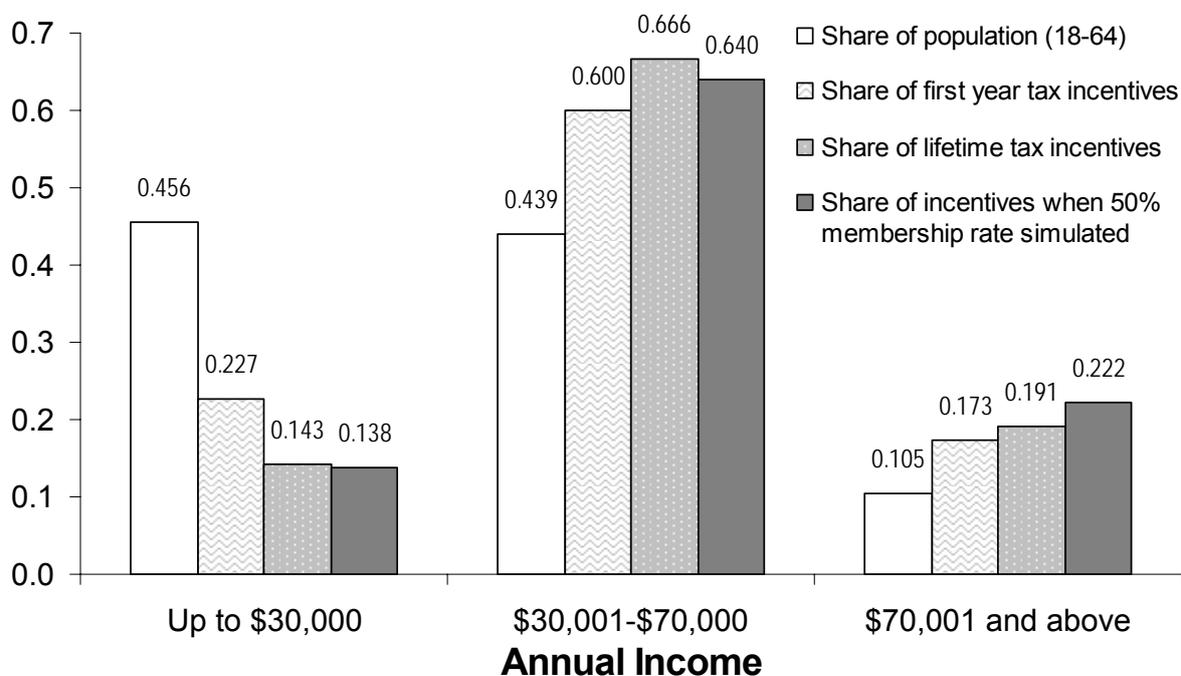
	Share of total income	Gini coefficient by source	Correlation with rank of total income	Share of income inequality	Relative income inequality
	(S)	(G)	(R)	(I)	(I/S)
Income source					
KiwiSaver Tax Subsidies ^a	0.0154	0.7010	0.6774	0.0178	1.1558
\$1000 kick-start	0.0009	0.9694	0.1932	0.0004	0.4444
\$1043/yr tax credit	0.0098	0.6610	0.6437	0.0101	1.0306
ESCT exemption	0.0044	0.7986	0.8228	0.0070	1.5909
New Zealand Super	0.0691	0.8367	-0.3603	-0.0503	-0.7279
Earnings	0.7121	0.5716	0.8820	0.8672	1.2178
Other income	0.2032	0.8047	0.4187	0.1654	0.8140
TOTAL		0.4140			

Note: Calculations based on simulated membership estimated from the probit models in Table 4, assuming that 30% of the age eligible population are direct enrollees, 20% are auto-enrollees, and 50% are non-members. Existing KiwiSaver and

KiwiSaver compliant members (ca. December 2007) maintain their membership. The simulated members are assumed to contribute 4% of earnings and the employer contribution is also 4%. Existing members and their employers maintain their current contribution (employer contribution rates below 4% are raised to 4%). Direct enrollees are assumed to have joined KiwiSaver before the current year, while one-fifth of auto enrollees are assumed to have joined in the current year with the rest joining in earlier years. For other notes, see Table 3.

Another way to consider the results from the simulation of 50% KiwiSaver membership is in terms of the incidence of the tax incentives. Figure 2 compares the population shares of various income groups with their shares of the tax incentives received in the first year, with the lifetime value of the tax incentives for first-year members, and with the shares of incentives once 50% of the population are members. Both the lifetime impact for first-year members and the simulated incidence in the year when membership reaches 50% are substantially more unequal than in the first year. For example, the richest group (those with incomes of \$70,001 and above) receive 22% of tax incentives once membership reaches 50% (and employer contributions are raised to 4%), compared with only a 17% share of the incentives in the first year.

Figure 2 Incidence of KiwiSaver Tax Incentives in Several Time Periods and Simulations



COMPARISONS WITH OTHER FINDINGS

The analyses reported in this paper are based on a survey that was fielded when KiwiSaver was not yet one year old. One concern with drawing inferences from these results may be that the results could differ if based on data that were collected once KiwiSaver had been in place for longer. However, the nature of our results suggests that such a concern is misplaced, because the largest contribution to inequality from KiwiSaver incentives is from the tax-free nature of the employer contributions, in the form of the ESCT exemption. Thus even if the analysis waited until a hypothetical situation where every worker in New Zealand had joined KiwiSaver, the tax incentives would still be found to be inequality increasing. The reason is that the ESCT exemption is capped in terms of a percentage of the worker's gross salary

rather than in dollar terms, so this incentive is worth much more for well-paid workers, and hence contributes to rising inequality.

Moreover, other analysts who use data from a later period than when our survey was fielded provide several corroborating results for the main results presented here. First, demographic data on membership compiled by Inland Revenue at the end of the first year of KiwiSaver accords well with the survey estimates in Table 1; auto-enrollees are younger and are paid below average (by one-quarter) while direct enrollees are paid above average (by one-quarter) compared with all wage and salary earners (Inland Revenue 2008:6–7). Second, St John et al. (2008) use hypothetical modelling of individuals under different assumptions about income, based on pre-1 October 2008 tax rates and assuming a net real rate of return of 2% in KiwiSaver funds, and find a very considerable inequality in the lifetime value of KiwiSaver incentives. They first consider a 40-year-old whose earnings (\$23,660) are only one-half of the weekly average, who at age 65 will receive a total value of KiwiSaver incentives and subsidies of \$69,889, with \$6,366 of this due to the tax exemption on employer contributions (the ESCT exemption). In contrast, for someone earning four times the weekly average (\$189,280) the ESCT exemption is worth \$94,578 by age 65 and the total value of KiwiSaver tax incentives and subsidies is worth \$164,315. These calculations show the inequality-increasing effects of KiwiSaver tax incentives, especially the ESCT exemption.

Furthermore, our findings concur with international evidence from longer-established tax-advantaged saving programmes. For the US, Joulfaian and Richardson (2001) found that in 1996 less than 10% of the benefits from tax-deferred earnings-based retirement saving programmes accrued to the bottom half of wage-earning households. By contrast, 55% of the benefits went to the top decile of households. According to a later study by Burman et al. (2004), about 70% of tax benefits from “401(k)” plans in 2004 went to the highest 20% of tax-filing units and over half to the top 10%. Given their lower contribution limits, Individual Retirement Account (IRA) tax benefits are less regressive. However, the top 40% of households still received 85% of these IRA tax benefits and the top quintile alone got 60%.²¹ Hughes (2002) observes that in Ireland and the UK, tax incentives for retirement saving result in high coverage rates for middle- and high-income earners, but low coverage rates for low-income earners. In both countries, two-thirds of the tax benefits accrue to the top income quintile, while less than 3% go to the bottom quintile.

OTHER IMPACTS OF KIWISAVER

Although our main attention has been on the effects of KiwiSaver incentives on inequality, our survey data also provide results that can help to understand other impacts of KiwiSaver, especially with regard to the stated goal of improving the financial position of New Zealanders in retirement.²² The questionnaire asked about several potential impacts, including expectations of the adequacy of retirement incomes and qualitative indicators of saving

²¹ 401(k) plans and IRAs are the most common voluntary, workplace-based, tax-preferred savings instruments in the USA. In 2004, employer plus employee contributions to 401(k) plans were tax deductible up to US\$41,000 or 100% of earnings in 2004, whichever was lower. The cap for IRAs was the lower of US\$3,000 or 100% of earnings.

²² An ideal study of improvements in financial position in retirement due to KiwiSaver would require panel data, because it involves a before and after comparison. Such data are not available and will not be available under current survey planning because it is only in the final wave of SoFIE that questions will be asked about KiwiSaver.

versus dis-saving and the trend in saving. In this section we examine the results for these indicators to see what impacts KiwiSaver may already be having.

Because KiwiSaver members differ from non-members in many ways, simple comparisons of means are unlikely to provide an unbiased estimate of the impact of joining KiwiSaver. Regression models can control for differences in average characteristics, but many studies show that this method is less successful at dealing with the sample selection problem that occurs when subjects in non-experimental studies cannot be randomly assigned to “treatment” and “control” groups. Such problems are relevant to attempts to measure the impacts of KiwiSaver, because members choose to join (even auto-enrollees have the choice to opt out).

Propensity-score matching (PSM) is an increasingly popular non-experimental evaluation method, with proponents claiming that it can replicate experimental benchmarks when appropriately used (Dehejia and Wahba 2002). Using PSM to estimate the impact of KiwiSaver entails first estimating a probit equation for the probability of a survey respondent being a member (including of KiwiSaver-compliant schemes). The resulting propensity score then allows each member to be matched only to those non-members whose characteristics give them similar predicted probabilities of being members. A comparison of the two matched samples then gives an estimate of the “average treatment effect”, which in this case is the impact on the outcome variable from joining KiwiSaver. The propensity scores also allow us to ensure that non-members who are quite unlike members are not used in the comparisons, in order to improve the validity of the impact estimates.

The results for five possible impacts of KiwiSaver that are considered are reported in Table 6. These impacts are: (i) the respondent’s expectation about the adequacy of their future retirement income, (ii) whether the respondent’s household is currently saving, in the sense of spending less than income, (iii) whether they are dis-saving, by spending more than income, (iv) whether their saving has gone up in the past year, and (v) whether saving has gone down. In addition to the average treatment effects estimated with PSM, the table also reports the overall mean of these five variables and linear regression estimates of the treatment effects.

The two statistically significant impacts apparent are that KiwiSaver members expect their retirement income to be more adequate than do non-members (by 0.4 points on a five-point scale) and they are more likely to report that their household saving has gone *down* in the last year. Specifically, 33% of the working-age population live in a household where saving is reported to have gone down in the last year. But KiwiSaver members are even more likely to say that their household saving has gone down, with statistically significant treatment effects of 9.4% (PSM) and 11.6% (probit). Hence, if one of the aims of KiwiSaver is to increase the overall level of household saving, this initial result does not look promising. Given the turbulence that occurred in financial markets in 2008, it may be several years before any effect of KiwiSaver on household saving can be observed in aggregate data, so continued surveying of household saving behaviour may be required to detect this impact.

Another notable feature from Table 6 is the low proportion of households who are dis-saving, in the sense that they report spending more than their income. Less than 13% of the working-age population is living in such households (with no significant difference between those in KiwiSaver and those not). Perhaps coincidentally, the 2001 Household Saving Survey (HSS) also found that 13% of adults had negative net worth, which would reflect a wealth stock

position consistent with having a flow of dis-saving.²³ Although dis-saving by 13% of adults may be a concern, it appears to be a far less widespread problem than is believed by key decision-makers. For example, the Minister of Finance who introduced KiwiSaver often claimed that “for every dollar households earn, they spend \$1.15 on average” (Cullen 2007). Even if the other 87% of the population are zero savers rather than positive savers, the 13% dis-savers would need to spend \$2.15 per dollar of income for the claimed \$1.15 of spending per dollar of income to be true on average. It is doubtful that banks and other lenders would allow such profligacy over the long run (the data series of household saving rates behind the \$1.15 average appear negative since 1993), so there may be a need for closer examination of the savings data that appear to have partly motivated the introduction of KiwiSaver, and possibly the tax incentives in KiwiSaver II.

Table 6: Impacts of KiwiSaver Membership on Saving and Retirement Income Expectations

	Mean (std dev)	KiwiSaver Treatment Effects Regression ^a (std error) ^c	PSM ^b (std error) ^c
Expected adequacy of retirement income 1 = Totally inadequate, 5 = Very satisfactory	2.552 (0.052)	0.387 (0.145)***	0.398 (0.128)***
Household spends less than income	0.456 (0.026)	-0.071 (0.071)	-0.029 (0.052)
Household spends more than income	0.126 (0.018)	-0.028 (0.035)	-0.006 (0.031)
Saving gone up in the last year	0.234 (0.022)	-0.014 (0.058)	0.009 (0.055)
Saving gone down in the last year	0.327 (0.024)	0.116 (0.064)*	0.094 (0.056)*

Note: Estimates are based on 480 observations for working age respondents to the KiwiSaver survey. The KiwiSaver membership includes those respondents in KiwiSaver compliant schemes. The models also include dummy variables for age group, gender, ethnicity, highest qualification, region, home and other property ownership, and income.

^aAn ordered probit is used for the regression model of expected adequacy of retirement income, and probit models are used for the other four impacts studied. The coefficients reported have been transformed into marginal effects, showing the effect of a one unit change in the explanatory variable on the probability of the outcome.

^bPropensity Score Matching estimates, with the propensity scores estimated from a probit model of KiwiSaver membership, using dummy variables for age group, gender, ethnicity, highest qualification, region, home and other property ownership, and income. Five blocks of the propensity scores are created and the balancing property is satisfied. The average treatment effects are estimated by kernel matching, restricted to the region of common support and the standard errors are from 100 bootstrap replications.

^c*** = significant at 0.01, ** = significant at 0.05, * = significant at 0.1.

²³ The HSS had separate samples of unpartnered individuals and couples, and the 13% is a weighted average of 24% of unpartnered individuals and 8% of couples having negative net worth. Some commentators such as Skilling and Waldegrave (2004) wrongly give unpartnered individuals the same weight as couples (rather than half the weight, since a couple has two people) and report that 16% of the population had negative wealth.

CONCLUSIONS

Recent changes to New Zealand's system of saving for retirement, with the introduction of KiwiSaver and its associated tax incentives, will increase future inequality in lifetime incomes and lead to diverging living standards for the elderly. Such inequalities might be considered an inherent feature of any saving scheme, since rewards partly depend on the amount of risk that is borne. However, it is unclear whether either proponents of the KiwiSaver scheme or the general public are aware of the likely impacts on inequality. This is especially because the most dis-equalising component of KiwiSaver incentives is the ESCT exemption, which was introduced in December 2006, with little fanfare and even less consultation (St John 2006), outside of the main announcements in May 2005 for KiwiSaver I and in May 2007 for the subsequent extensions of KiwiSaver II incentives.

These increases in inequality might also be deemed to be an acceptable cost in order to obtain the benefit of higher household saving. However, there are grounds for doubt about this as well, since both previous New Zealand experience and overseas evidence suggests that tax incentives for saving mainly encourage shifts from non-tax-favoured saving into tax-favoured saving, with little change in overall saving but a large hidden cost to the Government in tax foregone. In a companion paper to the present study, we use the survey results to examine how much new household saving is being stimulated by KiwiSaver and how much is simply a reshuffling of money that would have been saved anyway. It appears that out of every dollar in KiwiSaver accounts, only 9–19 cents is new saving (Gibson and Le 2008). The evidence on household saving behaviour reported in the current paper also gives grounds for caution when interpretations are made that equate the total amount in KiwiSaver balances as “new” saving. Whatever the ultimate change in household saving brought about by KiwiSaver, it is an open question as to whether this is sufficient to warrant the increases in inequality described here. Continued monitoring of this inequality increase and ongoing comparison with the inequality-reducing benefits of New Zealand Superannuation will remain relevant tasks for all social policy analysts and practitioners interested in inequality and retirement living standards.

REFERENCES

- Burman, L., W. Gale, M. Hall and P. Orszag (2004) “Distributional effects of defined contribution plans and individual retirement arrangements” *National Tax Journal*, 57(3):671–701.
- Crossan, D. (2007) *Review of Retirement Income Policy*, Retirement Commission, Wellington.
- Cullen, M. (2007) “Budget gives \$40 a week to support saving” Budget speech, May 17, <http://www.beehive.govt.nz>.
- Dehejia, R. and S. Wahba (2002) “Propensity score matching methods for non-experimental causal studies” *Review of Economics and Statistics*, 84(1):151–161.
- Gibson, J. (2008) “The future of the New Zealand retirement income system: Some reflections” presentation to the Retirement Policy Research Centre Superannuation Policy Symposium, 16 April 2008, University of Auckland, Auckland, <http://www.symposium.ac.nz/default.asp?CategoryID=11>.
- Gibson, J. and T. Le (2008) *How Much New Saving Will KiwiSaver Produce?* Working Paper 08/03, University of Waikato, Hamilton.
- Ginn, J., D. Street and S. Arber (2001) *Women, Work, and Pensions: International Issues and Prospects*, Open University Press, Philadelphia, PA.

- Hughes, G. (2002) *Private Pensions and Equity in Ireland and the UK*, Papers WP142, Economic and Social Research Institute, Dublin.
- Inland Revenue (2008) *KiwiSaver Evaluation: Annual Report 1: 1 July 2007 – 30 June 2008*, prepared by Evaluation Services, Inland Revenue for Inland Revenue, Ministry of Economic Development, Housing New Zealand Corporation.
- Joulfaian, D. and D. Richardson (2001) “Who takes advantage of tax-deferred saving programs? Evidence from federal income tax data” *National Tax Journal*, 54(3):669–688.
- Le, T. (2007) *Does New Zealand Have a Household Saving Crisis?* Working Paper 2007/01, New Zealand Institute of Economic Research, Wellington.
- Le, T., G. Scobie and J. Gibson (2007) “Are Kiwis saving enough for retirement: Preliminary evidence from SoFIE” paper prepared for the *8th Annual SuperFunds Summit*, 15–16 March 2007, Wellington, <http://www.treasury.govt.nz/publications/informationreleases/saving/sofie>.
- Lerman, R. and S. Yitzhaki (1985) “Income inequality effects by income source: A new approach and applications to the United States” *Review of Economics and Statistics*, 67(1):151–156.
- Littlewood, M. (2008) *KiwiSaver, Compulsory Employer Contributions and Remuneration*, Briefing Paper 04/2008, Retirement Policy and Research Centre, University of Auckland.
- New Zealand Treasury (2008) *Pre-Election Economic and Fiscal Update*, New Zealand Treasury, Wellington.
- O’Connell, A. (2004) *Citizen’s Pension: Lessons from New Zealand*, Discussion Paper, Pensions Policy Institute, London.
- Scobie, G., J. Gibson and T. Le (2005) *Household Wealth in New Zealand*, Institute of Policy Studies, Wellington.
- Skilling, D. and A. Waldegrave (2004) *The Wealth of a Nation: The Level and Distribution of Wealth in New Zealand*, Discussion Paper 2004/1, New Zealand Institute, Auckland.
- St John, S. (2006) “Saving principle abandoned” *New Zealand Herald*, December 14.
- St John, S., M. Littlewood and L. Meehan (2008) *The Distributional Impact of Recent Changes to Retirement Income Policy: A Preliminary Analysis*, Working Paper 2008–2, Retirement Policy and Research Centre, University of Auckland.
- St John, S., and L. Willmore (2001) “Two legs are better than three: New Zealand as a model for old age pensions” *World Development*, 29(8):1291–1305.
- Whitehead, J. (2007) “Better saved than sorry: The Treasury’s position on New Zealand’s saving performance” speech delivered by John Whitehead, Secretary to the Treasury, 13 August 2007, Chapman Tripp Wellington, <http://www.treasury.govt.nz/publications/mediaspeeches/speeches/savingperformance>

KIWISAVER: A MODEL SCHEME?

Alison O'Connell¹
Institute of Policy Studies
Victoria University of Wellington

Abstract

KiwiSaver is the world's first national auto-enrolment savings scheme. So far only one other country – the United Kingdom – has committed to auto-enrolment on a national scale. Both schemes aim to increase the number of people saving for retirement, and they share many design features. However, there are significant differences in the way the schemes are delivered, with implications for the levels of choice, risk and cost for savers and government. The United Kingdom's personal accounts scheme, sizeable though it is, is only part of a complicated private savings landscape, whereas KiwiSaver is fast becoming the predominant vehicle for retirement saving in New Zealand. It offers a working model for countries seeking to create a simple and unified national scheme for lifetime saving.

INTRODUCTION

KiwiSaver has transformed savings in New Zealand. It started on 1 July 2007, and at the end of June 2009 had over 1.1 million members (Inland Revenue 2009b). Membership is expected to plateau in 2012 at 1.4 million (Inland Revenue 2009a).

KiwiSaver contains several innovative features, the main one being auto-enrolment, sometimes called “soft compulsion”. Workers are enrolled automatically into saving and can choose to opt out if they wish, but if they stay in the scheme the employer is compelled to contribute.

Auto-enrolment captures some learning from behavioural economics (see, for example, Madrian and Shea 2001): people have high inertia in relation to saving so are more likely to stay in a savings scheme into which they have been enrolled automatically than make the effort to join it themselves. Although auto-enrolment is used in some employer-based savings schemes in the United States, KiwiSaver is the world's first auto-enrolment scheme on a national scale. The United Kingdom (UK) has also committed to national auto-enrolment with compulsory employer contributions, and to a new scheme called personal accounts (PAs). The first UK proposals were made a year after KiwiSaver began to be discussed (Pensions Commission 2005), and the start date is planned to be in 2012.

This paper compares these two schemes. It begins with a discussion of the important points of policy context in both countries. It then explains the differences between KiwiSaver and auto-enrolment plans in the UK, in terms of the areas of the markets the schemes cover, and the delivery model used or planned. Next it discusses the policy choices made in each case on what have emerged as the important dimensions: level of investment and provider choice for the saver and levels of risk and cost for both government and saver. The two schemes have taken different positions on these aspects. This paper argues that KiwiSaver encourages more

¹ **Correspondence**

Email alison@oconnellnz.com. Alison O'Connell was Director of the Pensions Policy Institute (PPI) in the UK to 2006. This paper is based on a presentation at a PPI policy seminar in London in July 2008.

choice and is less risky, although the jury is out on whether it is higher cost. Finally, the paper considers whether KiwiSaver would be a good model for other countries.

Table 1 briefly compares some features of auto-enrolment in the two countries. This paper focuses on the different delivery models, and so there are many points of detail in both KiwiSaver and the UK schemes that are inevitably not covered here. Readers who wish to know more are referred to www.kiwisaver.govt.nz and the relevant UK government publications (Department for Work and Pensions 2006, 2007).

Table 1 Selected Features of Auto-enrolment Retirement Savings in New Zealand and the UK (as at July 2009, current plans for the UK)

	New Zealand	UK
Who is auto-enrolled?	Employees aged 18–65 who are permanent residents of NZ.	All employees aged 22–65 earning around £5,000 or over.
When is auto-enrolment?	On job change.	Every employee, starting 2012. Exact phase-in plan to be decided.
Opt-ins	Yes – any permanent resident aged under 65.	Complex – see text.
Member contributions	2%, 4% or 8% of gross pay for employees; others as provider rules.	4% of band earnings (around £5,000 to £33,500 in 2005/6 terms).
Compulsory employer contributions	2% of gross pay.	3% of band earnings, phased in.
Government subsidy	Matched contributions up to \$20 a week.	Marginal tax relief on contributions, worth around 1% of band earnings.
Employer subsidy	Exempts employer contributions to ESCT.*	None.
Other incentives	\$1,000 kick-start lump sum on joining. Investment returns can be taxed at favourable rate.**	Investment returns largely tax free.
Accessing money saved	Available tax free after minimum 5 years membership at public pension age (65), if significant financial hardship or permanent emigration. Restricted options for first home subsidy.	Tax free lump sum available of up to 25% of total funds. Remainder must be annuitised by age 75, taxed as income.

* Employer superannuation contribution tax (formerly known as specified superannuation contribution withholding tax, or SSCWT) up to a maximum of 2% of the employee's gross pay.

** Depending on fund structure and member's income level.

A word on terminology: KiwiSaver is a defined contribution retirement savings product.² Although money saved can be taken out before age 65 in specific circumstances, and can be taken out at age 65 by someone in work or not, the money saved is intended to be used primarily in retirement. This is the same as for PAs, although UK tax rules make saving for retirement liable to compulsory annuitisation. It is therefore natural to call PAs a pension scheme. This is one of many environmental differences between KiwiSaver and PAs, which should not distract from the overall comparison between the two.

² “Defined contribution” means that contributions are invested and the amount available when taken out depends on the investment returns achieved. Each saver bears the investment risk in his or her own account. Defined benefit schemes used to be more prevalent than today in both the UK and New Zealand. In these schemes the pension benefit is defined by a formula usually related to number of years worked, with no investment risk passed to the individual member.

RETIREMENT INCOME POLICY CONTEXT: UK AND NEW ZEALAND

The only two countries in the world – so far – to plan an auto-enrolment savings scheme both did so to extend the number of people saving for retirement. However, the policy developments were aimed at different perceptions of the problem (O’Connell 2006). In both countries active membership of workplace pension or superannuation schemes has been falling. But in 2006, before KiwiSaver, the proportion of working-age New Zealanders making some kind of retirement saving above the public pension³ was around half the 40% achieved in the UK.⁴ The rationale for KiwiSaver in New Zealand was part micro-economic – getting households into the habit of saving was good for the individuals concerned – and part macro-economic – national savings would improve and local capital markets would develop.

The UK already has huge and well-developed capital markets, and any possible macro-economic benefit of a new savings product has not been part of the debate. The UK problem was seen to be that while some people are saving “enough”, large numbers are saving nothing or not enough to make up for the poor public pensions. This was characterised as a problem of access to good savings schemes through the workplace, and so the new personal accounts scheme (PAs) is targeted at those workers whose employers do not already offer a pension scheme.

Following the first proposals by the Pensions Commission in 2005, the Pensions Act 2008 outlined the way in which auto-enrolment will work and formally gave the Personal Accounts Delivery Authority (PADA) executive powers to deliver PAs. So while the outline of the plan has been widely discussed, many details are still being worked on before launch in 2012.

We can already see the extraordinary progress of KiwiSaver. The Inland Revenue’s Evaluation Services report (2008a) on KiwiSaver’s first full year⁵ showed that membership had reached 22% of the eligible population. This size of membership was previously forecast to be reached in 2011. By the end of June 2009 membership had grown further to reach around one-third of the eligible population (Inland Revenue 2009b).

A survey of employers with pre-existing workplace schemes found that most members stayed in those schemes on the introduction of KiwiSaver (Inland Revenue 2008a:34). This means that KiwiSaver members include many people who have not previously saved for their retirement in designated schemes. The total proportion of people saving for their retirement in New Zealand is therefore higher than the one-third of those eligible for KiwiSaver. This is high by international benchmarks. Consider the UK: membership of defined benefit schemes has been reducing fast, until they are now mainly limited to the public sector and very large private companies. The highly incentivised defined contribution market is well developed since major reforms two decades ago, but KiwiSaver has taken less than a year to exceed the proportion of working-age people currently in defined contribution pensions in the UK.⁶

³ This is NZ Superannuation in the case of New Zealand, Basic State Pension and other second-tier public pensions such as State Second Pension in the UK.

⁴ Estimates are based on Government Actuary data for New Zealanders aged 18–64 and Pensions Policy Institute 2008a for people aged 15–64 in the UK.

⁵ These figures are as at 31 July 2008; KiwiSaver started on 1 July 2007.

⁶ Author’s own calculations; details available on request.

Why has KiwiSaver proved so popular? Around one-third of members surveyed after six months of the scheme starting said that incentives and design features played a part in choosing to join KiwiSaver (Inland Revenue 2008b:21). At that time, the incentives for members were more generous than those shown in Table 1, with an additional fee subsidy of \$20 every six months (as well as other differences in minimum level of contribution and employer incentives). KiwiSaver incentives, generous compared to the previous lack of incentives for saving in New Zealand, were probably worth less for each saver than UK pension incentives at the time.⁷ However, given the complexities of the UK's tax relief system, KiwiSaver's matching contributions may seem more tangible and easier to understand (and are less regressive).

Incentives do not appear to be the whole story, though. For over 60% of members in the six-month survey, "saving for retirement" was the main reason for joining (Inland Revenue 2008b:21). In other words, the availability of a simple retirement savings product, with lock-in to age 65, has proved attractive in its own right. Auto-enrolment is obviously proving effective at starting people saving, and generic KiwiSaver brand and provider-specific marketing must be helping. KiwiSaver provides a lesson in how attractive a simple and easily accessible private retirement savings product can be. That lesson has eluded policy makers in many countries, including the UK, over many years.

It does not appear to be the case that KiwiSaver is attractive only to a narrow group. KiwiSaver members are of all ages, with young workers aged 18–24 and the over 55s particularly well represented. Although workers opting in have higher incomes than average eligible salary and wage earners, auto-enrolled workers have lower than average incomes. Women make up 51% of members (Inland Revenue 2009a).

KIWISAVER AS A "WHOLE MARKET" SOLUTION

PAs form one part of the private pension landscape in the UK, but KiwiSaver is a "whole market" solution, as defined by three important features.

First, any permanent resident of New Zealand under 65 can join KiwiSaver at any time, employed or not. As at the end of June 2009, around 61% of KiwiSaver members have opted in. The number of opt-ins seems to have been highest at the start of the scheme, with a smaller peak when employer contributions became compulsory. Around 39% of KiwiSaver members have joined through auto-enrolment. Of those who have been automatically enrolled, 34% opted out (Inland Revenue 2009b). People are continuously being automatically enrolled into KiwiSaver as that occurs on job change. Steady growth in members is expected to continue for some time.

Second, any amount can be contributed at any time. Employees choose a 2%, 4% or 8% of salary regular contribution, but can put more in lump sums whenever they choose. Amounts in existing complying pension schemes can be transferred in.

Third, KiwiSaver is becoming the predominant retirement savings product for New Zealand. Some existing workplace schemes are still open to employees of specific organisations, but the full incentives are only available through KiwiSaver. KiwiSaver is also an important

⁷ Author's estimate; details available on request.

national brand. Because it is a government-sponsored product, available to everyone, the brand has been developed and paid for by government.

This is in marked contrast to the UK situation, where employers will be responsible for putting in place a scheme into which their employees will be enrolled. Many employers already have some kind of workplace pension scheme, but an employer can choose to sign up with the PA scheme. So in the UK there will not be a single brand, a “BritSaver” available to all, but instead a continuing range of variously named pension products with access depending on employer arrangements.

Creating a new scheme in a market with a lot of existing provision has caused tensions. The existing providers – pension funds and insurers – have lobbied hard for PAs to be “ring-fenced” for the target market, so that PAs do not eat into existing business. Partly as a result, access to PAs is restricted, contributions are capped (at £3,600, or around \$10,000 a year), and transfers from existing pension savings to PAs are not allowed. Only the self-employed will be able to opt in to PAs. A worker for an employer outside the PA scheme will have to join his or her employer’s scheme and/or take out an individual pension product, but cannot join the PA scheme even if he or she would prefer to. However, outside the existing employer relationship, a worker may use his or her PA set up by a previous employer.

These distortions keep complexity in the system and will mean people end their career with lots of different pots from different jobs. KiwiSaver starts in a simpler market, with fewer and smaller existing providers, but it should be an advantage that, from the individual saver’s point of view, all retirement saving over a lifetime can be collected in one KiwiSaver pot. KiwiSaver can be *the* organising account for an individual’s lifetime savings.

KIWISAVER BUILDS ON EXISTING PROVISION AND PROVIDERS

Given the size and sophistication of the pre-existing UK market compared to that in New Zealand, it seems counterintuitive that the New Zealand government chose to build on existing provision and providers to create KiwiSaver, whereas the UK government is pioneering a new model for delivering PAs. Yet this is indeed the case.

The KiwiSaver Act 2006 sets out what the KiwiSaver product should look like and the conditions that have to be met to provide a KiwiSaver product. Any provider can apply to become a KiwiSaver provider, through a registration process handled by the Government Actuary. KiwiSaver products are run by 31 different providers, most of which are existing financial services companies such as banks, insurance companies and investment managers. Six providers have been chosen through a tender process to provide KiwiSaver default funds, to which auto-enrolled members are allocated with equal probability.

Existing workplace retirement savings provision has continued since the introduction of KiwiSaver. Such schemes can apply to convert to a KiwiSaver scheme. Employees are only auto-enrolled into a KiwiSaver scheme, so if an existing scheme does not convert it has to run alongside access to KiwiSaver. The exception is for some very large employers, who offer such good schemes they have been granted an exemption from auto-enrolment. So far, survey evidence indicates that while some members of existing schemes have joined KiwiSaver as well, none have transferred to KiwiSaver and most have carried on in their existing scheme (Inland Revenue 2008a).

In contrast, the UK scheme of PAs has been designed to take an entirely new approach. The Personal Accounts Delivery Authority (PADA) is a new non-departmental public body accountable to Parliament and reporting, through a board, to the appropriate Secretary of State. The new body will be responsible for oversight of the new systems – contribution collection, account administration and fund management – but will outsource these functions to the private sector.

PAs will offer a limited choice of funds for savers and a default fund for those who do not choose a fund. The expectation is that the vast majority of members will not move out of the default fund, so that in effect the PA scheme will be one large fund, invested at arm's length by the investment managers chosen by PADA. A new system for administering membership and allocation of contributions to investment will be built and operated by external suppliers, again chosen by PADA.⁸

So instead of using traditional savings product providers like banks and insurance companies to run individual products (as in KiwiSaver), PADA will contract wholesale investment managers and administration companies to run, essentially, one large fund. Competition will be through contracts set up by PADA rather than by individual consumers making their own choice of product. It is worth noting at this point that although the PA scheme is just part of the UK pension market, and targeted at new savers, it could have up to 7 million active members (PADA 2008:13). So the PA scheme alone is several times the size of KiwiSaver.

The policy process that decided on this “one large fund” model set up a straight contest between two alternatives: this centralised model and a so-called “industry” model, which was very similar to KiwiSaver. The reasons given for choosing the winning model were that it would have the lowest cost and simplicity for the target members, and that private market suppliers would have the skills, expertise and capacity to deliver (Department for Work and Pensions 2007:25).

DIFFERENT POLICY DECISIONS

Choice

As a result of the different policy decisions, KiwiSaver and auto-enrolment in New Zealand are very different from PAs and auto-enrolment in the UK in three key ways. First: choice. The policy approach to choice in KiwiSaver can be illustrated by the following quote from Inland Revenue (2008a:27): “Choices in schemes, providers and contribution rates provide [KiwiSaver] members with opportunities to exercise control over their investment choices and to choose a savings scheme that is appropriate for their circumstances.”

Savers can choose which KiwiSaver provider they want to administer their product and which investment fund they want to be in. An auto-enrolled member does not have to make a choice as he or she will be allocated to one of the six default funds. Alternatively, employers can nominate a KiwiSaver provider that acts as a default for its employees (opt-in or auto-enrolled).

⁸ After PAs start, PADA will cease to exist and PAs will be run by a non-profit Trustee Corporation. However, this paper continues to refer to PADA for simplicity.

UK policy for PAs is different, based on the view that PA members will not want to choose and do not have the financial literacy to choose well, and that too much choice can cause decision paralysis (Department for Work and Pensions 2007:102–103). A PA member will have no choice on which company administers his or her account, because administration is contracted out. The PA scheme will focus on one default fund for efficiency and offer few other funds. As in KiwiSaver, a PA member does not have to stay in the default fund, but all default PA members are in one fund rather than being distributed across six providers.

Since KiwiSaver started, 35% of KiwiSavers entered via one or other of the six default funds, 13% via an employer-nominated scheme and 53% via one of the non-default active choice schemes (Inland Revenue 2009a:34). This understates the proportion of members who have made an active choice, as some of the members in the default fund chose that rather than being allocated to it, and some members would have made a choice subsequent to entry. It seems, therefore, that KiwiSavers are exercising more choice than in the assumption underlying the UK's centralised model.

But the “whole market” of KiwiSaver would be expected to exercise more choice than the restricted and largely auto-enrolled target market for PAs. The UK view that most people will not switch out of the default fund seems to be supported – so far – by the 90% of KiwiSaver auto-enrollees who entered via the default or employer-nominated scheme (Inland Revenue 2009a:35). However, it is not known how many of these considered moving out but actively chose to stay in the default fund or how many will choose to move out of the default scheme in future. Also, some KiwiSaver members making active choices have chosen a default fund. This will not be a choice open to British savers.

The KiwiSaver market seems to have avoided the threat of paralysis due to too much choice. KiwiSaver providers do not offer many funds each. For example, it is typical for a major bank to offer five funds only, described by risk type. The *Sorted* website⁹ helps with a “risk recommender” to help people find their preferred risk category out of a possible six. Information on fees for each fund is available by category. The smallest category has just over 20 funds, the largest has under 40. This may be a consequence of a small and less developed market, but an impression of the information disclosed on KiwiSaver funds is that it is easier to understand than the more complicated disclosure information required for UK pensions.

Cost

The second way that PA policy decisions are very different from KiwiSaver is in cost. A cost target has not been explicit in the development of KiwiSaver. Reasonable fees are required to pass the registration test for a KiwiSaver provider, with a stronger test for providers of the six default funds. So what providers charge is up to them, as is how they spend the money they collect through fees (on marketing, or advisers for example). Competition between providers would be expected, and Inland Revenue (2008a:54) reports from a survey of KiwiSaver providers that they have had to adapt to a new “low-cost, low-touch delivery model”.

A very strong operating cost target has been the driving force behind the policy decision for a centralised model for PAs. A key assumption of the Pensions Commission was that pre-existing UK pension provision had not extended to the target market for PAs (generally

⁹ www.sorted.org.nz, run by the Retirement Commission.

people on low to medium incomes), because it was not profitable to service that customer segment except at such high fees that returns were unacceptably reduced. The Pensions Commission suggested the centralised model so that operating costs could be kept low by economies of scale in investment and administration, and by making competition work through centralised contracts (rather than through individual products), which should reduce marketing expenditure and account switching.

The Commission's first estimate of a target annual management charge of 0.3% of funds under management for PAs was later amended to "possibly as low as 0.5% in the short term and below 0.3% in the long term" (Department of Work and Pensions 2006:94). There has been no further information from PADA on latest best estimates for 2012 and beyond, so whether this target can be met remains uncertain.

These target costs cannot be compared directly with those of KiwiSaver, largely because KiwiSaver is available to every New Zealander, so government (that is, the taxpayer) has financed part of the operations. For example, government has paid to advertise the brand and for generic KiwiSaver information and education. It has also set up a centralised clearing house for contribution collection within Inland Revenue.¹⁰

In the UK, auto-enrolment also affects every worker, but there will be no clearing house. Instead, individual employers have to manage contribution collection.¹¹ Compliance for contribution collection will be undertaken by the Pensions Regulator, a public body currently funded from taxation. Further, the PA scheme is ring-fenced for a targeted segment only. There can be no government subsidy to only part of the saving population, so future PA members have to finance the whole cost of PAs, including development costs.

Because the PA scheme is essentially a default fund, it is appropriate to compare it with default KiwiSaver funds. KiwiSaver fees are not reported in a standard way, but analysis of the instruments of appointments of these funds shows a range from around less than 0.4% to around 0.65% of funds under management. This early evidence therefore suggests that the KiwiSaver model transplanted to the UK could result in fees to the saver at a level within the target range for PAs, especially given the greater scale economies in the UK and that competition over time may reduce KiwiSaver fees.

Given that the aim of reducing cost proved critical for the decision on a centralised versus a provider model in the UK, it is worth questioning why costs mattered so much for PAs but have been relatively overlooked in KiwiSaver commentary. It could be that the New Zealand market is not as cost aware as the UK market. For example, there has been mandatory disclosure of fee levels using standard measures for long-term savings products in the UK for many years, whereas providers participate in fee comparisons for KiwiSaver voluntarily. But the KiwiSaver experience provides no evidence that the fee levels are off-putting to potential savers.

¹⁰ The largest cost to the taxpayer from such a scheme is the cost of incentives. As already noted, the cost per saver in the UK from the incentives there (in the form of marginal tax relief) is probably higher than the cost per saver of the incentives in KiwiSaver. However, the costs being considered here are operating and risk costs rather than tax incentives.

¹¹ This decision may have been taken because the Pay As You Earn systems in the UK could not be amended to allow for savings contributions as easily as the equivalent systems in New Zealand could be for KiwiSaver.

Risk

The third axis on which the UK and New Zealand models differ is in risk. The system risk in KiwiSaver has been managed. Providers were able to adapt or build what product systems they needed in time for the KiwiSaver launch. The clearing house for contributions was built within Inland Revenue, partly using existing systems. KiwiSaver systems – provider and Inland Revenue – are generally accepted to be working well, with some glitches mainly dealt with in the first year (Inland Revenue 2008a). The systems were set up very quickly: it took less than three years from the first report suggesting something like KiwiSaver (SPWG, 2004) to receiving the first contributions.

If the same pace of development had been achieved in the UK, the UK's first auto-enrolled contributions would already have been made, instead of waiting until 2012. Partly this is due to longer decision-making and legislative processes. However, there is also a long period of supplier procurement and new system build in the PA model that was not needed in the KiwiSaver provider model. The PA “one large fund” model concentrates the system risk in one new build. Building from scratch is itself more risky than the KiwiSaver model, which built off existing systems and gave the challenge of getting products ready to providers.

The risk of any system failure or dissatisfaction could, in any national scheme, rebound on government. This is true in the UK, despite PADA being a public body organisationally separate from government: the perception is still that the PA scheme is a government initiative. The KiwiSaver provider model is also a national government initiative, and some risk of system failure or dissatisfaction exists for Inland Revenue, although some risk is also spread among a number of private providers.

The risk to government from a national auto-enrolment savings scheme is not just the risk from systems. There is also the risk of saver dissatisfaction with investment or product performance. In the PA “one large fund” model, every default fund member will be exposed to the same investment strategy as chosen by PADA. The investment performance of that fund will therefore matter to millions of people, and it will be under intense scrutiny. Investment strategy has yet to be developed, but it has been assumed that the best investment strategy for this fund will be to diversify across asset classes, and to “lifestyle” so that a member's exposure to equities reduces in favour of bonds as he or she approaches retirement age (Department of Work and Pensions 2007:106).

KiwiSaver default funds are invested mainly in fixed interest, with at least 15% but less than 25% in growth stocks. This has been criticised, from a UK perspective, as being too conservative (Pensions Policy Institute 2008b). Yet, especially after 2008 financial markets events, is it possible to say which is the best investment strategy for so many people? And with millions of people investing in one fund, could the UK government afford not to make some compensation if some regulatory failure occurred in the fund?¹²

The KiwiSaver default model is not without risks. A problem with one of the six default providers could challenge the tendering decision, but the risk to savers is spread by having six default funds rather than one. The Retirement Commissioner (2007) raised the concern that

¹² There are two recent (2007/08) precedents for this: the UK government has offered compensation to workers of troubled firms with under-funded pension schemes, and the Parliamentary Ombudsman has recommended that government compensate policy holders of pension provider Equitable Life for losses due to regulatory failures.

the different KiwiSaver funds will give different returns to savers who have been allocated to them by chance, because the funds invest differently and have different costs. However, the government view is that the potential for different outcomes from the different default providers was accepted as part of the KiwiSaver design and that members could switch out of default funds without additional cost (Office of the Minister for Social Development and Employment 2008). This illustrates the underlying preference in KiwiSaver policy that individuals should make their own choices on what is appropriate for them.

Both the New Zealand and the UK models allow everyone to make some choices, although access to schemes is more restricted in the UK than in New Zealand. Both models also enable people not to make a choice, by having defaults. But the underlying preference in the UK model is different. The UK model recognises that people mostly will not make choices, and expects to make significant choices for them.

So a key question is this: even accepting that not many people will want to make a choice on fund or provider, is it then appropriate to make the same choice on behalf of all non-choosers? The UK model asserts that this is so because of the perceived cost advantage of the “one large fund” model, and the opportunity for superior investment returns by operating competitive contracts for investment managers.

Three arguments can be made for the contrary view. First, making decisions for savers shields them from the realities of the investment risks to which they are nevertheless exposed. It gives up on trying to improve financial understanding. Instead, KiwiSaver strategy has been, since an early Cabinet paper (Office of the Minister of Finance 2005:5) “to support a cultural change in New Zealanders’ attitudes toward savings to increase self reliance and forward planning”. The need for initiatives to increase financial literacy was recognised at that stage. Further ways to help people make appropriate choices (not just at auto-enrolment but throughout life as circumstances change) could include mandatory disclosure and standardised comparison of investment strategies, returns and costs.

Second, the supposed cost advantage from the UK model compared to the KiwiSaver model is not yet proven. Early evidence suggests that the KiwiSaver model can also operate within or close to the target fee range for PAs. Further, it is possible that any cost saving between the models is negated by poor investment performance, or some other detriment to the saver such as poor administration, delay in changing investment contracts or dissatisfaction with the level of ethical investment in the fund. Even if cost to the saver were higher in one model, the overall benefit to the saver from the package of level of choice, risk and cost may still be higher.

Third, the risk to the taxpayer also needs to be considered. The more decisions are made on behalf of savers, instead of being clearly each saver’s own responsibility, the higher the risk that government has to step in if anything were to go wrong. This is a contingent cost for the taxpayer.

CONCLUSION

Is KiwiSaver a good model for other countries?

Any country looking to introduce a national auto-enrolment retirement savings scheme can look to KiwiSaver or to the UK plans.

The success of any similar scheme in another country, and the appropriate scheme design, will depend on the particular context. Countries will have different issues with the extent and type of existing provision, savings incentives, levels of financial literacy and the interface with the public pension. For example, in the UK, the success of any policy to encourage retirement saving is threatened by the prevalence of asset- and income-tested benefits for people over pension age. On this point New Zealand cannot offer any experience, because the prevalence of such benefits is much lower, largely because NZ Superannuation is not means tested.

KiwiSaver will have five years' experience before the UK scheme starts. The early progress of KiwiSaver appears to confirm that auto-enrolment helps to bring in new savers, and that a simple, nationally branded and incentivised product can be attractive. The delivery method has worked. The economic and distributional impacts of KiwiSaver are not the subjects of this paper. It is too early to tell, but membership trends look promising. Some issues and uncertainties remain. The decisions on KiwiSaver incentives made after the 2008 general election show that changes can always be made.

Two major differences have been identified in this paper as rationale for the different delivery models chosen for the national auto-enrolment savings schemes in the UK and New Zealand. One is that KiwiSaver is a "whole market" solution, which has sought to involve existing providers in delivering a nationally branded product that can be an individual's single account for lifetime retirement saving (as well as saving for a first home, a feature which is not discussed in this paper). The UK model allows existing providers to participate in auto-enrolment through a continuation of existing varied products, but effectively prevents them from participating in a new ring-fenced scheme for a particular market segment. Therefore, KiwiSaver is a model for countries seeking to create a simple and unified national scheme for lifetime saving. The UK scheme is a model for countries wishing to include a further option in an existing market – but the KiwiSaver delivery model could work in this case too.

The other major difference is the UK's policy focus on low cost for the target new saver. This has allowed the expectation that people will not willingly make choices to result in the "one large fund" model. Less emphasis on low cost has allowed the KiwiSaver model to be consistent with a preference that people will make their own choices. It remains to be seen which model will result in better investment performance or more satisfied savers. But it is worth mentioning that there are other ways to control costs for the saver: cost caps could be imposed by regulation or, as in the early KiwiSaver model, government could subsidise fees.

In summary, therefore, KiwiSaver is a working model for other countries seeking a national auto-enrolment savings scheme with policy preferences in line with a balanced package of choice, risk and cost.

REFERENCES

- Department for Work and Pensions (2006) *Personal Accounts: A New Way to Save*, The Stationery Office, London.
- Department for Work and Pensions (2007) *Personal Accounts: A New Way to Save: Summary of Responses to the Consultation*, The Stationery Office, London.
- Inland Revenue (2008a) *KiwiSaver Evaluation: Annual Report 1: 1 July 2007 – 30 June 2008*, Inland Revenue, Wellington.
- Inland Revenue (2008b) *KiwiSaver Evaluation: Six-monthly Report 1: 1 July 2007 – 30 June 2008*, Inland Revenue, Wellington.
- Inland Revenue (2009a) *KiwiSaver Evaluation: Six-monthly Report: July - December 2008*, Inland Revenue, Wellington.
- Inland Revenue (2009b) *KiwiSaver Statistics as at 30 June 2009*, <http://www.kiwisaver.govt.nz/media/ks-media-stats-09-06-30.html>.
- Madrian, B.C. and D.F. Shea (2001) “The power of suggestion: Inertia in 401(k) participation and savings behaviour” *Quarterly Journal of Economics*, 106(4):1149–1187.
- O’Connell, A. (2006) *NPSS Policy and Design Choices*, Pensions Policy Institute, London.
- Office of the Minister for Social Development and Employment (2008) *Government Response to 2007 Review of Retirement Income Policy*, <http://www.beehive.govt.nz/>
- Office of the Minister of Finance (2005) *Budget 2005 Savings Package: Work Based Savings Scheme*, memorandum to Cabinet Policy Committee, 6 April 2005, <http://www.treasury.govt.nz/>
- PADA (Personal Accounts Delivery Authority) (2008) *Discussion Note Supporting the Prior Information Notice (PIN) for contracts to run the personal accounts scheme from 2012*, <http://www.padeliveryauthority.org.uk/>
- Pensions Commission (2005) *A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission* TSO London.
- Pensions Policy Institute (2008a) *Pension Facts*, Table 14, <http://www.pensionspolicyinstitute.org.uk/news.asp?s=8/>
- Pensions Policy Institute (2008b) PPI seminar: Lessons from KiwiSaver http://www.pensionspolicyinstitute.org.uk/uploadeddocuments/Events/2008%20event%20s/PPI_KiwiSaver_Seminar_Writeup_10_July_2008.pdf
- Retirement Commissioner (2007) *2007 Review of Retirement Income Policy*, Retirement Commission, Wellington.
- Savings Product Working Group (SPWG) (2004) *A Future for Work-Based Savings in New Zealand* <http://www.beehive.govt.nz/Documents/Files/WorkplaceSavings.pdf>

**CHILDREN IN FAMILIES SUPPORTED BY MAIN BENEFITS:
AN UPDATE**

Moira Wilson
Daniel Soughtton¹

Centre for Social Research and Evaluation
Ministry of Social Development

Abstract

This paper updates an earlier analysis that examined children's likelihood of being included in a benefit at different ages. We find that up until 2007, children born between 2000 and 2007 were less likely to be included as a dependent child in a main benefit than children born in the 1990s at all ages. The proportion included in a benefit at birth or very soon after fell from around 25% of children born in the 1990s to 20% of children born in 2005 and 2006 and 18% of children born in 2007. Although contact with the benefit system fell, as many as one in five children turning 15 in 2008 are estimated to have been supported by a main benefit for a total of seven or more of their first 14 years of life. An estimated one in ten spent a total of 11 or more of their first 14 years supported by a main benefit.

INTRODUCTION

Between 2001 and 2007 the number of people receiving Unemployment Benefit or Domestic Purposes Benefit in New Zealand decreased substantially. With this decline, the proportion of children aged under 18 whose caregivers are receiving these or other main benefits² dropped from an estimated 26% in June 1996 to 19% in June 2007 (Figure 1). In June 2007, 205,000 children aged under 18 were included as a dependent child with a caregiver receiving one of the main benefits (Ministry of Social Development, 2008:31).³ Eight out of ten of these children were included as the dependent child of a sole parent receiving the Domestic Purposes Benefit. Fewer than one in twenty of the children included in a benefit were with a caregiver receiving an Unemployment Benefit, this proportion having fallen from around one in five in 1999.⁴

In this paper we explore the drop in children's inclusion in the main benefits in more detail, updating an earlier analysis by Ball and Wilson (2002), which examined the prevalence and persistence of low family income for New Zealand children based on indicative measures from benefit data.⁵ We look at how the proportion of children in different birth cohorts on a

¹ Acknowledgements

The authors would like to thank Chris Lane, Debbie McLeod, Bryan Perry, Jason Raven and Murray Shadbolt of the Ministry of Social Development, and Bill Boddington of Statistics New Zealand for their helpful comments on earlier drafts. Any errors or omissions remain the responsibility of the authors.

² The main benefits include the Domestic Purposes Benefit, Emergency Maintenance Allowance, Unemployment Benefit, Training Benefit, Sickness Benefit, Invalid's Benefit, Widow's Benefit and Emergency Benefit.

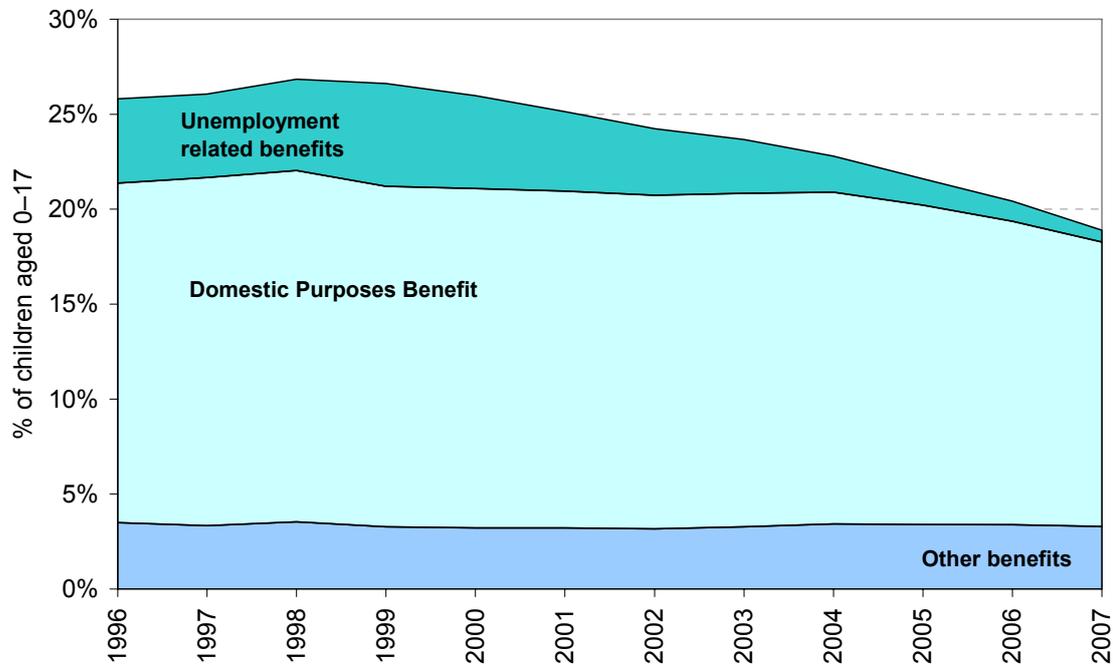
³ In June 2008 200,000 children aged under 18 were included as a dependent child with a caregiver receiving one of the main benefits (source: Ministry of Social Development Information and Analysis Platform). At the time of writing, the population estimates required to calculate the June 2008 proportion of children whose caregivers were receiving main benefits were not available.

⁴ Source: Ministry of Social Development, Information and Analysis Platform.

⁵ See Barrett et al. 2003 for a multivariate analysis of factors associated with the length of time children spent included on a benefit.

benefit at given ages has changed. We also examine changes in the total time children in successive birth cohorts have been supported by the main benefits in their early years.

Figure 1 Estimated percentage of children aged under 18 included in a main benefit, as at June⁶



Source: Ministry of Social Development (MSD) Information and Analysis Platform; Statistics New Zealand (SNZ), national population estimates by single year of age, June quarters 1996–2007.

DATA AND METHOD

The analysis is based on the Ministry of Social Development’s Benefit Dynamics Dataset (BDD), a research data set assembled from historical benefit administration data.⁷ The BDD can be used to create individual benefit histories for each child ever included in a main benefit from 1993 onwards. The BDD has a number of strengths, including:

- *a relatively long study period* – at the time of writing the BDD lets us view and analyse 14 years of benefit history at the individual level
- *no sampling error, or response or attrition bias* – the data set contains information on all benefit recipients and not a sample, so sampling error, response bias and bias resulting from attrition are not issues for this analysis

⁶ Unemployment-related benefits are the Unemployment Benefit and Unemployment Benefit Hardship. The Domestic Purposes Benefit (DPB) includes the DPB – Caring for Sick or Infirm, DPB – Sole Parent, DPB – Woman Alone, and Emergency Maintenance Allowance.

⁷ The BDD uses historical benefit administration data stored on the MSD Information Analysis Platform (IAP) to construct individual histories of benefit use. It is updated biannually. It includes no name or address information that could be used to identify individuals. See Wilson 1999 or Wilson 2001 for a more detailed description of the data.

- *continuous longitudinal data* – the continuous nature of the data set means that we are not limited to monthly or quarterly snapshots of benefit status, which means we are able to observe benefit spells of relatively short duration, making our calculations of total time spent on benefit very precise.

As far as we are aware, the combination of these last two features is unusual. Researchers engaged in similar analyses in other countries often rely on fortnightly, monthly or quarterly snapshot data and/or data for only a sample of social assistance recipients (e.g. Bradbury 2006, Gregory and Klug 2002, Platt 2006).

Longitudinal data based on administrative records data does have limitations, including:

- *errors in reporting, recording and assembling data* – although efforts are made to check and correct for errors, not all can be identified and accounted for
- *limited variables for analysis* – the data available are limited to information collected or created in the process of benefit administration, one consequence of which is that key socio-demographic information (such as the ethnicity of children included in a benefit)⁸ is not recorded
- *limited population coverage* – the data include no records for caregivers or children who had no contact with the benefit system, and we are required to estimate the size of this group in order to calculate the measures presented in this paper.

The method of analysis is to consider all children born between 1 January 1993 and 31 December 2007 who were included as a dependent child in a main benefit, grouped into calendar year birth cohorts. We calculate indicators of whether or not each of these children was included in a benefit at different ages, and calculate their total duration included in a benefit by given ages.⁹ We then combine these calculations with estimates of the total population in these birth cohorts potentially able to be included in benefits to estimate measures of the prevalence and persistence of benefit receipt for the cohorts of children overall (including those not receiving a benefit). The approach we take to this varies depending on the specific measure, and is documented in the text and in notes to the tables and figures presented.

FINDINGS

The Proportion of Children Included in a Benefit at Birth Has Fallen

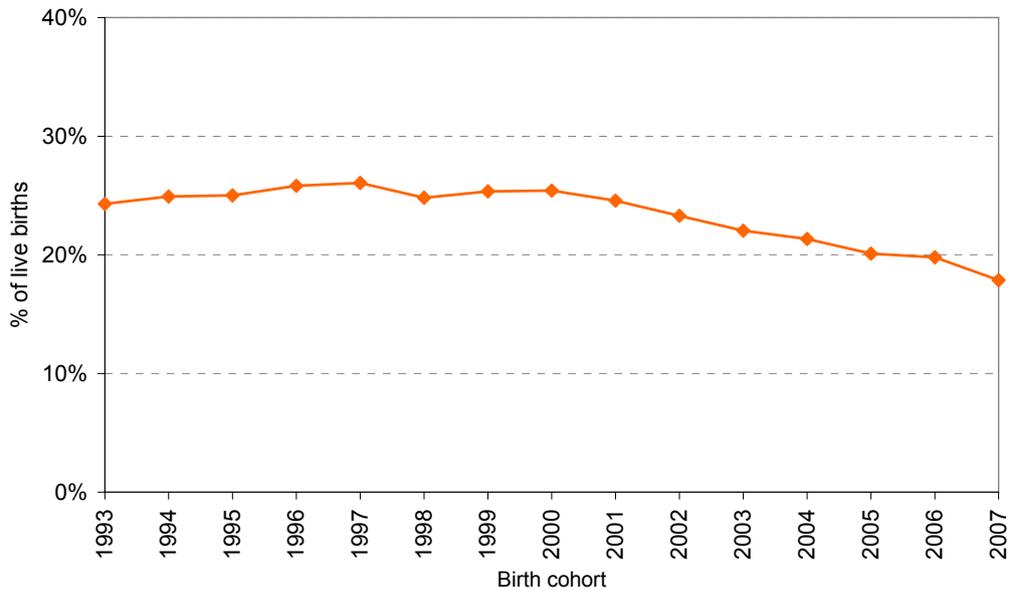
Figure 2 shows the estimated proportion of children in each cohort included in a main benefit at birth.¹⁰ Throughout most of the 1990s around 25% were included in a benefit on the date of their birth or very soon after. Since 2000 this proportion has declined to 20% of children born in 2005 and 2006, and 18% of children born in 2007.

⁸ However, analysis by the ethnicity of the caregiver claiming benefit can be informative (see Platt 2003, Platt 2006 and Barrett et al. 2003).

⁹ For a full list of the data-cleaning techniques applied, see Ball and Wilson (2002).

¹⁰ Our count of children included at birth includes children who were included in a benefit within eight weeks of birth with a caregiver whose benefit receipt was ongoing on the date of their birth. Ball and Wilson (2002) found that the proportion of children having contact rose steeply over the first few weeks from birth, and when the caregiver's benefit status prior to the child's inclusion was examined it appeared that in most cases this reflected a delay in applying for the child to be included in a benefit that was already ongoing.

Figure 2 Estimated percentage of children included in a main benefit at birth, by birth cohort¹¹



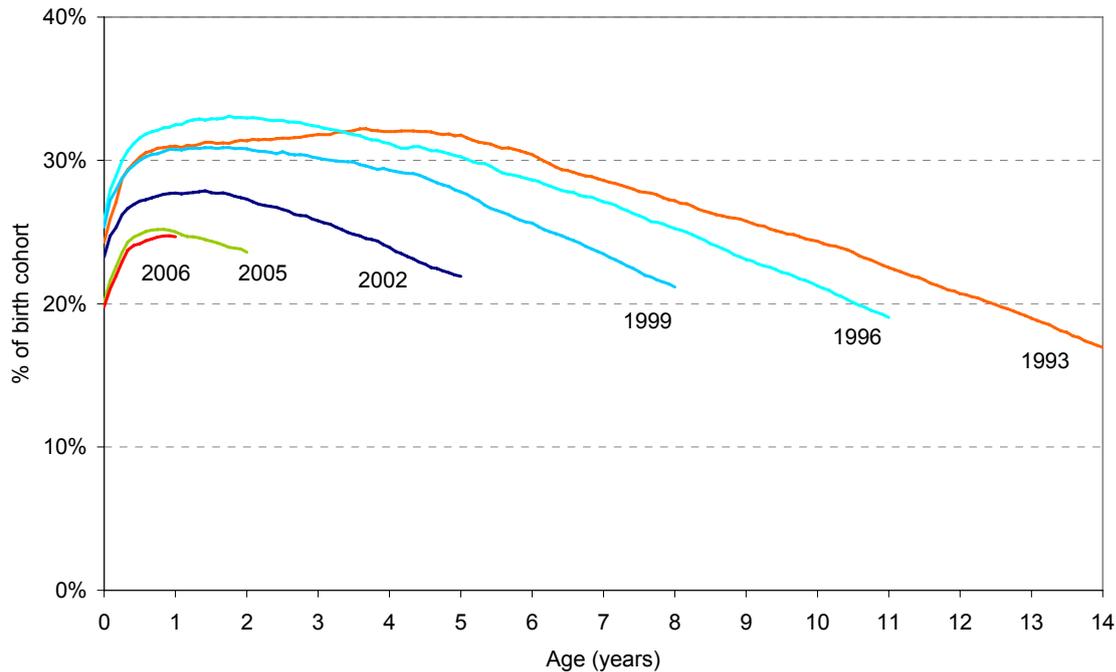
Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2007.

The Proportion of Children Included in a Benefit at Each Birthday Has Fallen

Figure 3 shows the estimated proportion of children in selected cohorts included in a benefit at monthly intervals from birth. At the time of writing we could follow the 1993 birth cohort (young people turning 15 in 2008) until their 14th birthday. Children born in later years could be followed for shorter periods.

¹¹ Estimated by dividing the number of children included in a benefit on their birth date (or included in a benefit that was ongoing on their birth date within eight weeks of birth) by the number of live births (Statistics NZ, *Demographic Trends 2006*).

Figure 3 Estimated percentage of children included in a main benefit, by age and birth cohort¹²



Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2006; national population estimates by single year of age, mean for year ending December 1993–2006.

Children in more recent birth cohorts were less likely than children born in the 1990s to be included in a main benefit at all ages for which comparisons can be made. At the age of two an estimated 24% of children born in 2005 were included in a benefit, compared with 33% of children born in 1996. This represents a nine percentage point reduction in the proportion of children supported by main benefits at this age.

The age at which the proportion of children included in a main benefit peaks has fallen considerably. For example, the proportion of the 1993 cohort included in a benefit peaked between the ages of four and five, while for the 2001 cohort rates of receipt peaked between the ages of one and two, and for the 2005 cohort it appears to have peaked before age one.

Just Over Half of Children Currently Reaching Adolescence Have Been Supported by the Main Benefits at Some Time

Using the BDD we can obtain the number of individual children born in 1993 who had spent some time included in a benefit by different birthdays over their first 14 years. Figure 4 expresses this number as a proportion of all those who could potentially have received a benefit, using two alternative denominators.

Line (A), the higher of the two lines, was calculated by dividing the number ever included by each age in the BDD by the number of registered live births in 1993. The number of live births clearly understates the number of children born in this year ever potentially able to be

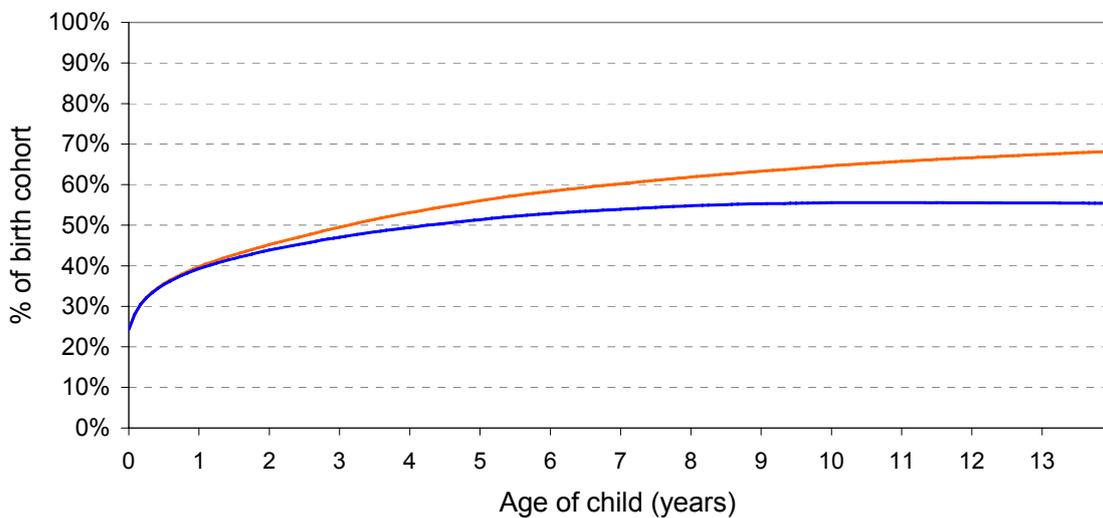
¹² Live births are used as the denominator at age zero. Population estimates are used as the denominator for our calculations of the proportion of each birth cohort included in a main benefit at the mid-point of each year of age. Linear interpolation is used to estimate the number of children present in the population in the intervening months.

included in the main benefits because it excludes the children who migrated to New Zealand over the period of the study.

For the denominator in line (B) we added to the number of live births an estimate of the number of individual children born in 1993 who had entered the population as migrants by each birthday using Statistics New Zealand permanent and long-term arrivals data.¹³ Our estimates suggest that just over 55% of children born in 1993 ever present in New Zealand were included in a benefit at some point by age 14. There was little increase in the proportion of the cohort having any contact beyond age five. Of the children who had contact in their first 14 years, 58% were included in a benefit at least once by their first birthday, and 82% were included at least once by their fifth birthday.

We use the estimation approach taken for line (B) for all the tables and figures in the remainder of the paper. The Appendix gives more details of the estimation method and potential sources of over-estimation and under-estimation. On balance, we expect the estimates to overstate the number of different children ever present (for example, this method would double-count children born in New Zealand who left the country and subsequently arrived as permanent or long-term migrants). The estimates of the proportion of children in each cohort who had contact with the benefit system and who had extended contact with the benefit system presented in this paper are therefore likely to be conservative.

Figure 4 Estimated proportion of the 1993 birth cohort having contact with main benefits by each age, using as alternative denominators (A) the number of live births and (B) an estimate of the number ever present, which includes those arriving as migrants



— (A) Using the number of live births — (B) Using an estimate of the number ever present

Sources: MSD: BDD; Statistics New Zealand: number of live births; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

¹³ Estimates for the intervening months are obtained using linear interpolation.

A Sizeable Minority of Children Currently Reaching Adolescence Have Spent Very Long Periods Supported by Main Benefits

Ball and Wilson (2002) estimated that one in five children born in 1993 spent at least five of their first seven years supported by a main benefit. Table 1 provides updated estimates that examine these children’s experiences up to age 14. It shows the estimated proportion of the cohort spending different total lengths of time included in a benefit over their first 14 years. For many the duration was fairly short, but one in five children born in 1993 are estimated to have been supported by a main benefit for seven or more of their first 14 years of life. An estimated one in ten spent a total of 11 or more of their first 14 years of life supported by a main benefit.

Table 1 Estimated proportion of 1993 birth cohort spending different total amounts of time supported by a main benefit by age 14¹⁴

Duration	% of cohort	Cumulative % of cohort
All 14 years	2	2
13-< 14 years	4	6
12-< 13 years	3	8
11-< 12 years	2	11
10-< 11 years	2	13
9-< 10 years	2	16
7-< 9 years	5	21
5-< 7 years	6	27
3-< 5 years	7	34
1-< 3 years	10	44
Up to 1 year	11	55
No contact	45	

Sources: MSD BDD; SNZ: number of live births; permanent and long-term arrivals by single year of age, year ended December 1993-2007.

Children Born after 2000 Have Spent Fewer of Their Early Years Included in a Benefit than Children Born in the 1990s

Children in more recent birth cohorts were less likely than children born in the 1990s to be included in a benefit at various ages. The figures below indicate that this was associated with both a fall in the estimated proportion of children ever being included in a benefit, and a fall in the estimated proportion experiencing persistent inclusion.

Table 2 shows that, of the estimated population of children ever present and potentially able to be included in a benefit, the proportion who spent no time in their first year included in a benefit increased from around 60% for those born in the 1990s to 70% for those born in 2006.

¹⁴ Total time is calculated by summing all spells included in a benefit over the first 13 years of life. Breaks in receipt of less than 14 days are treated as part of a continuous spell and are included in the calculation. Our estimate of the total number of children who could have spent time on a benefit by age 14 is the number of births in 1993, plus an estimate of the number of children born in that year who entered New Zealand as permanent and long-term migrants before age 14 (see the Appendix).

The proportion spending all of their first year included in a benefit dropped from a high of 20% for those born in 1996 to 15% for those born in 2005 and 2006.

Table 2 Estimated percentage of children in cohort spending given percentages of total time included in a main benefit by age one (selected birth cohorts)¹⁵

	Birth cohort					
	1993	1996	1999	2002	2005	2006
0% (no time)	61%	60%	61%	64%	69%	70%
1–49%	9%	9%	9%	9%	7%	7%
50–99%	12%	11%	10%	10%	9%	8%
100%	18%	20%	19%	18%	15%	15%
All in cohort	100%	100%	100%	100%	100%	100%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2006; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Table 3 shows the proportion spending different amounts of time included in a benefit by age three. The difference between the birth cohorts of the 1990s and early 2000s is again marked, with the proportion spending no time at all included in main benefits increasing from an estimated 52% for the 1996 birth cohort to 62% for the 2004 birth cohort.

Table 3 Estimated percentage of children in cohort spending given percentages of total time included in a main benefit by age three (selected birth cohorts)

	Birth cohort				
	1993	1996	1999	2002	2004
0% (no time)	53%	52%	54%	58%	62%
1–49%	17%	17%	17%	16%	15%
50–99%	18%	18%	16%	15%	13%
100%	11%	14%	13%	11%	10%
All in cohort	100%	100%	100%	100%	100%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993–2004; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Children Born More Recently Have Been Less Likely to Have Multiple Spells of Inclusion in a Benefit

The following table shows the estimated proportions of children in the 1993 and 2002 birth cohorts who spent different lengths of time included in a benefit by age five, broken down by whether that time was spent in a single continuous spell or multiple spells. A spell is defined as a period of benefit receipt where any breaks in receipt last for no longer than 14 days.

¹⁵ Total time is calculated by summing all spells included in a benefit over the first year of life. Breaks in receipt of less than 14 days are treated as part of a continuous spell and are included in the calculation. Our estimate of the total number of children who could have spent time on a benefit by age one is the number of births in the corresponding year, plus an estimate of the number of children aged under one who entered New Zealand as permanent and long-term migrants in that year.

Table 4 Estimated percentage of children in cohort with different total durations included in main benefits in single and multiple spells by age five
1993 birth cohort

Number of spells	Duration				
	less than 2 years	2 to 3 years	4 to 5 years	All 5 years	All durations
Single	12%	5%	5%	8%	30%
Multiple	7%	7%	7%		21%
Total	19%	12%	11%	8%	51%

2002 birth cohort					
Number of spells	Duration				
	less than 2 years	2 to 3 years	4 to 5 years	All 5 years	All durations
Single	12%	6%	4%	7%	29%
Multiple	6%	6%	4%		16%
Total	18%	12%	8%	7%	46%

Sources: MSD: BDD; SNZ: number of live births, years ended 1993 and 2002; permanent and long-term arrivals by single year of age, years ended December 1993–2007.

Children in the later cohort were less likely to spend their time included in a benefit in multiple spells. The proportion with multiple spells on a benefit declined from 21% for children born in 1993 to 16% for those born in 2001. This is likely to partly reflect the decline in the proportion of children included as a dependent in unemployment-related benefits between 2001 and 2007: recipients of unemployment-related benefits are more likely than other groups to cycle on and off a benefit as they enter and exit employment (Wilson 1999).

CONCLUSION

This paper updates an earlier examination of children's inclusion in the main benefits. The findings presented here show that up until 2007 children born between 2000 and 2007 were less likely to be included in a main benefit at each age than children born during the 1990s, less likely to spend long periods of time in their early years included in a benefit, and less likely to spend the time included in a benefit in multiple spells. Although the overall trend has been one of reduction, the main benefits continue to provide financial support for many children, particularly at younger ages.

Finally, the data presented point to a group of young people born in the 1990s who experienced extended periods supported by the main benefits. An estimated one in five children born in 1993 spent seven or more of their first 14 years of life included in a benefit, and one in ten spent 11 or more of those years included in a benefit.

REFERENCES

- Ball, D. and M. Wilson (2002) "The prevalence and persistence of low income among New Zealand children: Indicative measures from benefit dynamics data" *Social Policy Journal of New Zealand*, 18:92–117.
- Barrett, G., F. Krsinich and M. Wilson (2003) "Young children supported by benefits in New Zealand: A duration analysis" *New Zealand Population Review*, 29(1):131–153.
- Bradbury, B. (2006) "Disadvantage among Australian young mothers" *Australian Journal of Labour Economics*, 9(2):147–171.
- Gregory, R.G. and E. Klug (2002) "Some implications of multiple income support spells among lone mothers with dependent children", appendix accompanying *A Picture Book Primer: Welfare Dependency and the Dynamics of Female Lone Parent Spells*, Australian National University, Canberra.
- Ministry of Social Development (2008) *The Statistical Report for the Year Ending June 2007*, Ministry of Social Development, Wellington.
- Platt, L. (2003) "Ethnicity and inequality: British children's experience of means-tested benefits" *Journal of Comparative Family Studies*, 34:357–377.
- Platt, L. (2006) "Social insecurity: Children and benefit dynamics" *Journal of Social Policy*, 35:391–410.
- Wilson, M. (1999) "The duration of benefit receipt: New findings from the benefit dynamics data set" *Social Policy Journal of New Zealand*, 13:59–82.
- Wilson, M. (2001) "Longitudinal analysis of administrative data: The Ministry of Social Policy's Benefit Dynamics Project" paper presented at the *Ministry of Social Policy Longitudinal Research and Social Policy Seminar*, 5–6 April, Wellington.

APPENDIX

We use the following formula to calculate our estimates of the number of different children born in each year ever present in the population and potentially able to receive the main benefits by given ages.

(A) The number of live births in a calendar year
+
(B) an estimate of the number of children born in that calendar year who entered as a permanent or long-term migrant at each age
=
(C) the estimated number of different children potentially able to receive the main benefits at some time between birth and each birthday.

For example, the number of children born in 1993 potentially able to receive the main benefits at some time by age 14 is calculated as:

(A) live births in 1993 (Source: Statistics New Zealand)	58,782
+ (B) estimated number of permanent or long-term migrants born in 1993 who entered by age 14	13,621
= (C)	72,403

where (B) is approximated by the sum of the shaded cells in the table below.

Table A1 Permanent and long-term arrivals, by age group, calendar years

Year	Age at arrival													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13
1993	755	956	897	797	828	756	727	697	730	706	738	722	735	787
1994	910	1,043	996	1,075	1,014	905	913	867	878	892	877	845	874	956
1995	1,059	1,301	1,311	1,252	1,270	1,287	1,227	1,219	1,136	1,111	1,082	1,077	1,127	1,056
1996	972	1,256	1,190	1,256	1,216	1,255	1,115	1,101	1,058	1,045	1,053	1,037	1,024	1,040
1997	809	988	992	994	974	941	931	934	887	864	839	788	864	823
1998	648	885	788	824	871	767	831	801	789	734	691	685	614	647
1999	645	849	790	787	808	773	744	737	759	736	645	651	604	609
2000	622	774	834	798	829	737	756	735	744	697	722	757	678	656
2001	687	983	954	945	957	944	926	937	917	954	984	1,015	912	924
2002	805	1,108	1,170	1,146	1,161	1,148	1,119	1,132	1,157	1,123	1,225	1,138	1,064	1,148
2003	847	1,165	1,097	1,151	1,075	1,126	1,060	1,025	1,121	1,086	1,155	1,091	1,089	1,063
2004	857	1,022	1,026	1,016	1,017	968	908	911	927	981	931	1,004	931	971
2005	916	1,102	1,109	970	1,041	964	952	938	922	967	1,013	1,014	922	900
2006	918	1,130	1,159	1,055	1,066	1,031	985	1,004	990	980	1,036	971	977	915

Source: Statistics New Zealand.

This estimation approach will overstate the number of individual children ever present and potentially able to receive the main benefits to the extent that:

- children born in New Zealand who migrated overseas later returned to New Zealand as permanent or long-term migrants¹⁶
- children arrived in New Zealand as permanent or long-term migrants more than once in the period
- children who arrived in New Zealand as permanent or long-term migrants then left New Zealand before their caregiver achieved sufficient residency to qualify for the main benefits (people must generally be resident in New Zealand for at least two years before they are able to claim main benefits, unless they are able to qualify on the grounds of hardship).

The approach will understate the number ever present and potentially able to receive the main benefits to the extent that:

- children who arrived in New Zealand as short-term or temporary migrants later became resident in New Zealand (the Work to Residence policy introduced in 2002 made changing residency status once in New Zealand a more common route to permanent residence)
- not all births are registered (this is likely to be a more modest source of underestimation).

On balance, we expect that we overestimate the number ever present.

¹⁶ These children could be excluded in future analyses by using customised permanent and long-term migration data by single year of age and country of birth. However, country-of-birth information has been collected only since July 2000 and as a result could not be used to consistently adjust estimates for the birth cohorts compared in this analysis.

**ETHNIC IDENTITY AND EXPOSURE TO MALTREATMENT IN CHILDHOOD:
EVIDENCE FROM A NEW ZEALAND BIRTH COHORT**

Dannette Marie¹

Department of Psychology, University of Otago, Dunedin
School of Psychology, University of Aberdeen, UK

David M Fergusson

Joseph M. Boden

Department of Psychological Medicine, University of Otago
Christchurch School of Medicine and Health Sciences

Abstract

Exposure to maltreatment in childhood, including sexual abuse, severe physical punishment and inter-parental violence, is an issue of growing concern in New Zealand. The present study examined the associations between ethnic identity and exposure to childhood maltreatment among a longitudinal birth cohort of individuals born in Christchurch in 1977. Participants of Māori ethnicity reported higher rates of exposure to physical punishment and inter-parental violence, but did not report higher rates of exposure to sexual abuse. Control for a range of socio-economic and family functioning factors reduced the magnitude of the associations between ethnicity and both physical punishment and inter-parental violence, but did not fully account for the associations between ethnicity and maltreatment exposure. Furthermore, adjustment for variations in Māori cultural identity indicated that cohort members of sole Māori identity were at significantly increased risk of exposure to both physical punishment and inter-parental violence. It was concluded that Māori, and in particular those of sole Māori cultural identity, were at higher risk of exposure to physical punishment and inter-parental violence, and that the associations could not be fully explained by either socio-economic deprivation or exposure to family dysfunction in childhood.

INTRODUCTION

Exposure to child maltreatment, including sexual abuse, physical abuse and inter-parental violence, can have a deleterious impact on healthy child development. Damaged attachment bonds, impaired physical and mental health, poorer psychosocial adjustment, and cognitive performance leading to lower educational achievement are outcomes that have all been linked with childhood maltreatment (Boden et al. 2007, Cicchetti and Toth 2005, Collishaw et al. 2007, Dagnault and Hebert 2004, Fergusson and Horwood 1998, Fergusson, Horwood et al.

¹ Acknowledgements

This research was funded by grants from the Health Research Council of New Zealand, the National Child Health Research Foundation, the Canterbury Medical Research Foundation and the New Zealand Lottery Grants Board.

Correspondence

Prof. David M. Fergusson, Department of Psychological Medicine, University of Otago, Christchurch School of Medicine and Health Sciences, PO Box 4345, Christchurch, New Zealand. Telephone: 64 3 372 0406, facsimile: 64 3 372 0407, email: dm.fergusson@otago.ac.nz

1996, Fergusson and Lynskey 1997, Mullen and Tonge 2000, Noll et al. 2008, Salzinger et al. 2001, Woodward et al. 2001).

The problem of child maltreatment may be of particular concern in New Zealand. In a UNICEF assessment of child maltreatment across 27 nations, New Zealand was ranked as having the third highest rate (1.2 per 100,000 averaged over a five-year period) of deaths from maltreatment of those under the age of 15 years (UNICEF 2003). Even though this category represents the most extreme outcome of child maltreatment, the data provide an indication of the likely rate of non-fatal child maltreatment in each of the nations examined. In a further assessment examining child wellbeing (UNICEF 2007), it was reported that, of the 25 wealthy nations reviewed, New Zealand had the second lowest rate of child health and safety as measured by averaging scores across three indicators (infant health, preventive health services and child safety).

In addition to the above statistics, it is the over-representation of Māori children in the nation's child abuse statistics that often attracts both professional and public attention (Kiro 2000, Mansell 2006, Pinto 2006, Wynd 2006). Evidence suggests that, when compared with other ethnic groups in New Zealand, Māori children are at greater risk of being exposed to physical, emotional and sexual abuse, and are more likely to experience neglect than children from any other ethnic group (Adolescent Health Research Group 2004, Lievore et al. 2007, Ministry of Social Development 2004, 2006). According to official statistical data, the rate of substantiated abuse per 1,000 children under the age of 17 was 11.9 for Māori in 2003 compared to 5.9 for non-Māori. This pattern of ethnic asymmetry, with Māori children being approximately twice as likely to be assessed as abused or neglected when compared with other children, has been consistently observed (Department of Social Welfare 1988, Kotch et al. 1993, Ministry of Social Development 2002, 2004).

These findings raise important questions about the factors that lead to Māori children being more vulnerable to exposure to and experience of child maltreatment. Although the results from various data sources concur about Māori children being over-represented in child abuse statistics, limited empirical research has been conducted into the risk and protective factors associated with the higher rate of child maltreatment among Māori. Nevertheless, three explanatory frameworks have been employed to account for the current ethnic disparities in child abuse in New Zealand.

One explanation for the higher rate of childhood maltreatment among Māori involves the issue of socio-economic disadvantage. Specifically, it has been well established that on a range of socio-economic indicators, including housing, income, welfare dependence, unemployment and educational achievement, Māori are at an increased risk of experiencing poverty and disadvantage (Chapple 2000, Marie et al. 2008b, Ministry of Social Development 2007, Statistics New Zealand 2002). Social deprivation has been strongly linked to risk of child maltreatment, and this factor has been prominent in attempts to explain the higher child abuse rates of indigenous and ethnic minority group members in other nations (Cross et al. 2000, Duran et al. 2004, Gordon 2006, Moisan et al. 1997, Sanders-Phillips et al. 1995). Thus it could be proposed that the higher rate of childhood maltreatment among Māori can be explained by the higher rate of socio-economic disadvantage experienced by Māori.

A closely related explanation involves an ecological "at risk" model of familial adversity (Ramey and Landesman Ramey 1998, Repetti et al. 2002). This perspective suggests that

there is a range of factors or stressors, either internal or external to the family, that interact and accumulate to impair healthy family functioning. Factors that may characterise poorly functioning families include: parental alcohol and drug abuse; parental criminality; and loose or unstable family structure, often involving teen parenting, sole parenting or serial changes of adults responsible for performing a care-giving role to children in a family (Cicchetti and Toth 2005, Freisthler et al. 2006, Tolan et al. 2006, Zielinski and Bradshaw 2006). Each of these factors has been associated with the maltreatment of children, and as research indicates, separate from economic disadvantage, Māori also have greater exposure to these factors of family dysfunction (Fanslow et al. 2007, Fergusson 2003, Ministry of Social Development 2004, 2007). It may be argued that the higher degree of family adversity experienced by Māori families accounts for the greater exposure of Māori children to childhood maltreatment.

A third framework, focusing on the role of cultural identity has, over the preceding two decades, been the dominant explanation employed to account for the ethnic asymmetry in child maltreatment rates in New Zealand (Balzer et al. 1997, Keddell 2007, Kiro 2000, Ministry of Social Development 2006, Pihama et al. 2003, Stanley 2000, Stanley and Thompson 1999). This view proposes that it is the degree of association that Māori families have with Māori kin groupings and the level of commitment they show to traditional customary practices that will influence the likelihood of Māori children experiencing maltreatment. From this perspective, strength of Māori identity in families is a protective factor for child abuse, and a lesser identification with Māori cultural domains may increase the risk of children being exposed to maltreatment. Intervention guidelines for child abuse have therefore been specifically developed for Māori, by Māori (Kruger et al. 2004, Stanley 2000, Stanley and Thompson 1999). These focus on determining the levels of affiliation Māori families have to cultural domains and the strength of cultural identity of individuals who reside in the family. Reattachment of Māori families to cultural domains and customs has therefore become a key feature of current child abuse intervention efforts.

Although each of these frameworks – socio-economic disadvantage, family functioning and cultural identity – could potentially explain ethnic differences in child maltreatment in New Zealand, to our knowledge there have been no empirical studies conducted that examine the way in which these factors may mediate links between Māori ethnicity and maltreatment. In addition, while each of the frameworks is not necessarily mutually exclusive, it proves possible, using longitudinal data, to determine the approximate contribution of each set of factors to abuse exposure outcomes.

Against this background, this paper reports on analyses of the links between ethnic status (Māori/non-Māori) and rates of childhood maltreatment (childhood physical abuse, childhood sexual abuse and inter-parental violence) in a birth cohort of New Zealand children studied to the age of 21. The aims of this research were to:

- ascertain the rates of childhood maltreatment reported by Māori and non-Māori respondents at the ages of 18 and 21
- examine the extent to which ethnic differences in childhood maltreatment could be explained by socio-economic and family functioning factors
- document the extent to which risks of childhood maltreatment vary with cultural identity after socio-economic factors and family functioning have been taken into account.

METHODS

The data were gathered during the course of the Christchurch Health and Development Study (CHDS). In this study, a birth cohort of 1,265 children (635 males, 630 females) born in the Christchurch (New Zealand) urban region in mid-1977 has been studied at birth, four months, one year and annually to age 16 years, and again at ages 18, 21 and 25 years (Fergusson and Horwood 2001, Fergusson et al. 1989). The analyses reported here were based on the 1,011 study participants (80% of the original sample) for whom information was available concerning ethnic identity at age 21. All study information was collected on the basis of signed and informed consent from the study participants.

Ethnicity and Cultural Identity

At age 21 years respondents were asked about their ancestry, cultural identification, level of participation in Māori cultural domains, and proficiency in the Māori language (Broughton et al. 2000). Participants were asked to indicate whether they belonged to or identified with one or more ethnic groups, including New Zealand Māori, and were asked whether they were of Māori descent. On the basis of this questioning, 11.1% of sample members self-identified as New Zealand Māori. A further break-down of this group showed 45.9% reporting sole Māori cultural identity and 54.1% reporting Māori cultural identity and identity with another cultural group. For the purposes of the present analyses, those reporting sole Māori identity were classified as having a sole Māori identity, while those reporting both Māori identity and another identity were classified as having Māori/other cultural identity. All other participants were classified as being non-Māori.

Comparisons of the sole Māori and Māori/other group showed consistent differences between the groups in terms of several aspects of Māori culture, including:

- frequency of marae visits ($p < .001$)
- being a member of a Māori group, organisation or sports team ($p < .05$)
- being a member of a kapa haka (cultural performance) group ($p < .001$)
- attending a tangi (funeral) or unveiling ($p < .001$)
- listening to Māori-language radio programmes and watching Māori-language television programmes ($p < .001$)
- listening and watching programmes in the English language about Māori ($p < .001$).

The descriptors “sole Māori”, “Māori/other ethnic identity” and “non-Māori” were originally recommended by Pomare et al. (1995) in their analyses examining ethnic trends in public health epidemiology.

In addition, evidence suggests that patterns of ethnicity may shift over time, with respondents indicating differing ethnicities at different points in the life span (e.g. Baldwin 2008). In order to examine this issue, self-reports of ancestry and cultural identification at age 25, analogous to those collected at age 21, were also used to classify respondents as sole Māori, Māori/other identity and non-Māori. In addition, maternal reports of the cohort member's ethnicity that were obtained when the cohort member was aged 14 years were again used to classify respondents into the same three groups.

Finally, it could be argued that it is the ethnicity of the family, rather than the ethnicity of the child, that is critical in determining outcomes (e.g. Callister et al. 2007, Fergusson et al.

1982). To examine this issue, cohort members were classified as sole Māori, Māori/other identity and non-Māori using:

- self-reported maternal ethnicity, obtained when the cohort members were aged 14 years
- mother-reported paternal (or mother's partner's) ethnicity, obtained when the cohort members were aged 14 years
- a combination of maternal and paternal (or partner's) ethnic identity, classified into three groups: (i) Māori only (both parents sole Māori); (ii) mixed Māori/other identity (at least one parent Māori/other identity); and (iii) non-Māori (neither parent reporting Māori identity).

Childhood Exposure to Sexual Abuse, Physical Punishment and Inter-parental Violence

Retrospective reports of exposure to childhood sexual abuse and physical abuse prior to age 16 were obtained from cohort members at ages 18 and 21 years. Sexual abuse was assessed using the following methods. At each assessment, participants were asked whether, before the age of 16, anyone had ever attempted to involve them in any of a series of 15 sexual activities when they did not want this to happen, including:

- non-contact episodes. involving indecent exposure, public masturbation or unwanted sexual propositions
- episodes involving sexual contact in the form of sexual fondling, genital contact or attempts to undress the respondent
- episodes involving attempted or completed vaginal, oral or anal intercourse.

Sample members who reported an incident of abuse were then questioned in depth about the context of abuse, including the frequency of abuse episodes, the characteristics of the perpetrator(s), abuse disclosure and related factors (Fergusson, Horwood et al. 1996, Fergusson, Lynskey et al. 1996). Using the check and narrative data gathered at each age (18, 21), participants were classified into one of four exposure groups reflecting the extent/severity of sexual abuse reports. These groups were:

- no sexual abuse (85.9% of the sample)
- non-contact sexual abuse only (2.7% of the sample)
- contact sexual abuse not involving attempted or completed sexual penetration (5.1% of the sample)
- attempted or completed sexual penetration including vaginal, oral and anal intercourse (6.3% of the sample).

In the present analysis, respondents were classified as belonging to the group corresponding to the most severe form of abuse reported at either age 18 or 21.

The assessment of childhood physical punishment was based on cohort members' reports of parental use of physical punishment. At 18 and 21 years, respondents were asked to report on the extent to which their parents used physical punishment during their childhood (prior to age 16 years). Reports were made on a five-point scale ranging from "parent never used physical punishment" to "parent treated me in a harsh and abusive way" (Fergusson and Lynskey 1997). Separate ratings were made for mother figures and father figures (if available). Ratings for both parents were then combined into a single rating at each age by classifying the participants into one of four groups based on the greatest level of exposure to physical punishment reported for either parent:

- parents never used physical punishment (6.4% of the sample)
- parents seldom used physical punishment (11.2% of the sample)
- at least one parent regularly used physical punishment (78.0% of the sample)
- at least one parent used frequent or severe punishment, or treated the participant in a harsh/abusive manner (4.5% of the sample).

In common with information on childhood sexual abuse, in the present analysis participants were classified into the group corresponding to the most severe level of punishment/abuse reported at either age 18 or 21 years.

At the age of 18, sample members were questioned concerning their experience of inter-parental violence during their childhood (prior to age 16 years). The questioning was based on a series of eight items derived from the Conflict Tactics Scale (Straus 1979). The items were chosen on the basis that the behaviours could have been readily observed and reported on by the participant, and also to span the potential range of violent behaviour from verbal abuse to physical assault. The eight items used included:

- threaten to hit or throw something at the other parent
- push, grab or shove other parent
- slap, hit or punch other parent
- throw, hit, kick or smash something (in the other parent's presence)
- kick other parent
- choke or strangle other parent
- threaten other parent with a knife, gun or other weapon
- call other parent names or criticise other parent (put other parent down).

Participants were asked to rate the frequency with which they observed each behaviour on a three-point scale (never, occasionally, frequently). Separate questioning was conducted for violence initiated by the father against the mother and for violence initiated by the mother against the father. A scale score was constructed by summing the 16 items to produce a measure reflecting the extent of reported exposure to inter-parental violence in childhood ($\alpha = .88$). For the purposes of the present investigation, the scale scores were classified into four groups on the basis of the overall inter-parental violence score. These groups comprised: those who reported no inter-parental violence (60% of the sample); those whose scores placed them within the 61st to 75th percentiles of the score distribution; those whose scores placed them within the 76th to 90th percentiles of the distribution; and those whose scores placed them in the most violent 10% of the distribution.

Covariate Factors

Socio-economic background

The socio-economic background of cohort members was assessed using several indicator measures chosen from the database of the study.

- *Maternal age*: This was assessed at the cohort member's birth.
- *Maternal education (at birth)*: The education level of the child's mother was assessed at the time of the survey child's birth using a three-point scale, which reflects the highest level of educational achievement attained (1 = mother lacked formal educational qualifications; 2 = mother had secondary-level educational qualifications; 3 = mother had tertiary-level qualifications).

- *Family living standards (0–10 years)*: At each year a global assessment of the material living standards of the family was obtained by means of an interviewer rating on a five-point scale, ranging from “very good” to “very poor”. These ratings were summed over the 10-year period and divided by 10 to give a measure of typical family living standards during this period.
- *Family socio-economic status (at birth)*: this was assessed at the time of the survey child’s birth using the Elley-Irving scale (Elley and Irving 1976) of socio-economic status for New Zealand. This scale classifies socio-economic status into six levels on the basis of paternal occupation, ranging from 1 = professional occupations to 6 = unskilled occupations.

Family functioning and individual factors

Measures of family functioning and individual adjustment were also chosen from the study database.

- *Parental illicit drug use (0–11 years)*: When sample members were aged 11, information was obtained from parents as to whether any parent had a history of illicit drug use. The young person was classified as having a parental history of illicit drug use if one of his/her parents was reported to have a history of illicit drug use.
- *Parental alcohol problems (0–15 years)*: Assessed at age 15 years via parental report, these reports were used to form a dichotomous measure of whether or not the young person’s parents reported experiencing alcoholism or problems with alcohol.
- *Parental criminality (0–15 years)*: When sample members were aged 15 years, their parents were questioned as to whether any parent had a history of criminal offending. The young person was classified as having a parental history of criminality if one of his/her parents was reported to have a history of offending.
- *Changes of parents (to age 15 years)*: At each assessment from birth to 15 years, comprehensive information was gathered on changes in the child’s family situation since the previous assessment. Using this information, an overall measure of family instability was constructed on the basis of a count of the number of changes of parents experienced by the child up to age 15. Changes of parents included all changes resulting from parental separation/divorce, reconciliation, remarriage, death of a parent, fostering, and other changes of custodial parents.

RESULTS

Associations between Childhood Sexual Abuse, Childhood Physical Punishment, Exposure to Inter-parental Violence and Ethnicity

Table 1 shows the cohort classified into two groups on the basis of self-reported ethnic identity at age 21: Māori (n = 114) and non-Māori (n = 897). For each group the table shows the distribution of the group on four-point ordinal measures of sexual abuse, physical punishment and inter-parental violence. For each comparison the table shows the results of a chi-square test derived from an ordinal logistic regression model.

Table 1 Percentage Reporting Differing Levels of Exposure to Sexual Abuse, Physical Punishment and Inter-parental Violence (to age 16), by Ethnicity

Exposure to abuse (% reporting)	Exposure level	Ethnicity	
		Māori (n = 114)	Non-Māori (n = 897)
Sexual abuse			
No abuse	0	81.6	86.3
Non-contact abuse only	1	2.6	2.8
Contact sexual abuse	2	7.9	4.9
Attempted/completed intercourse	3	7.9	6.0
$\chi^2 (1) = 1.86, p > .10$			
Physical punishment			
No physical punishment	0	2.6	4.4
Infrequent physical punishment	1	64.0	79.9
Regular physical punishment	2	19.3	10.1
Harsh/abusive physical punishment	3	14.0	5.5
$\chi^2 (1) = 20.75, p < .0001$			
Inter-parental violence exposure score			
1–60%	0	47.3	56.7
61–75%	1	17.3	22.5
76–90%	2	14.6	13.6
91–100%	3	20.9	7.2
$\chi^2 (1) = 9.49, p < .01$			

The table shows the following.

- The distribution of scores for Māori and non-Māori on the measure of sexual abuse exposure was not statistically significant, $\chi^2 (1) = 1.86, p > .10$.
- In contrast, cohort members of Māori ethnicity reported significantly ($p < .0001$) greater exposure to more severe forms of physical punishment than non-Māori. For example, 19.3% of Māori, as compared to 10.1% of non-Māori, reported exposure to regular physical punishment, and 14.0% of Māori, as compared with 5.5% of non-Māori, reported exposure to harsh/abusive levels of physical punishment.

Individuals of Māori ethnicity also reported significantly ($p < .001$) greater levels of exposure to inter-parental violence during childhood and early adolescence than non-Māori. For example, 20.9% of Māori, as compared with 7.2% of non-Māori, reported levels of inter-parental violence that fell within the highest 10% of scores on the measure of inter-parental violence.

The Role of Socio-economic Factors and Family Functioning

One explanation for the higher rates of exposure to abuse in childhood among Māori is that these increases in rates of physical punishment and inter-parental violence are due to social, economic and related disadvantages, to which Māori are more likely to be exposed than non-Māori. This issue is explored in Table 2, which shows the associations between ethnicity and a range of socio-economic and family functioning factors. Socio-economic factors included: maternal age, family socio-economic status at birth, maternal education, and average family living standards from ages 0–10. Family functioning factors included: parental history of alcohol problems, parental history of illicit drug use, parental history of criminal offending, and the number of parental changes to age 15. The table shows a consistent tendency for those cohort members of non-Māori background to have had a relatively advantaged childhood in the areas of family socio-economic background and family functioning as compared to Māori cohort members.

Table 2 Associations between Ethnicity and Measures of Childhood Socio-economic Factors and Family Functioning Factors

Measure	Ethnicity		p ¹
	Māori	Non-Māori	
Socio-economic factors			
Mean (SD) maternal age	23.36 (4.26)	26.25 (4.78)	< .0001
Mean (SD) family socio-economic status at birth ²	4.32 (1.37)	3.46 (1.41)	< .0001
% mother lacked formal educational qualifications	66.7	46.8	< .0001
Mean (SD) family living standards ages 0–10 ²	3.14 (0.43)	2.81 (0.45)	< .0001
Family functioning factors			
% parental history of alcohol problems	23.8	10.7	< .0001
% parental history of illicit drug use	38.7	22.2	< .001
% parental history of criminal offending	29.5	11.2	< .0001
Mean (SD) number of changes of parents to age 15	2.24 (2.98)	1.04 (2.24)	< .0001

1 t-test for continuous measures; χ^2 test of independence for percentage measures

2 Higher scores indicate lower levels of socio-economic status and living standards

Adjustments for Socio-economic Factors and Childhood/Family Factors

It could be argued that the results in Table 1 reflect the confounding influence of exposure to higher levels of adverse socio-economic and family functioning factors among Māori cohort members, as shown in Table 2. In order to examine the extent to which the associations between abuse exposure and ethnicity could be explained by confounding factors, the associations between ethnicity and abuse exposure were adjusted for the socio-economic factors and family functioning factors in two stages. In the first stage, ordinal logistic regression models were used to assess the associations between each measure of abuse exposure and ethnicity, net of the measures of socio-economic factors in childhood. Covariates were entered into the models in forward and backward stepwise fashion to arrive at stable models. In the second step, the ordinal logistic regression models adjusted for socio-economic factors were extended to include the measures of family functioning in childhood.

The results of these analyses are presented in Table 3, which shows adjusted percentages for each outcome for each of the two ethnic groups, following adjustment for socio-economic factors and socio-economic and family functioning factors. Adjusted percentages for each level of classification were estimated according to procedures outlined in the *Reference Guide for Stata v. 8.0* (StataCorp 2003).

Table 3 shows the following.

- After adjustment for socio-economic factors, and both socio-economic and family functioning factors, the association between exposure to sexual abuse in childhood and ethnicity remained statistically non-significant ($p > .90$). Statistically significant ($p < .05$) covariate factors included: family living standards, maternal education, parental changes and parental illicit drug use.
- Adjustment for socio-economic factors, and adjustment for both socio-economic and family functioning factors, reduced the magnitude of the association between exposure to physical punishment in childhood and ethnicity; however, the association remained statistically significant ($p < .05$) in both cases. Statistically significant ($p < .05$) covariate

factors included: socio-economic status at birth, parental alcohol problems, parental offending and parental changes. Examination of the adjusted percentages showed that cohort members of Māori ethnicity reported higher levels of exposure to physical punishment than non-Māori, across both adjusted models.

- Similarly, adjustment for socio-economic factors and adjustment for both socio-economic and family functioning factors reduced the magnitude of the association between exposure to inter-parental violence in childhood and ethnicity. In the case of adjustment for socio-economic factors, the association remained statistically significant ($p < .01$). In the case of adjustment for both socio-economic and family functioning factors, however, the association was reduced to marginal significance ($p = .06$). Statistically significant ($p < .05$) covariate factors included: family living standards, parental alcohol problems and parental changes. Examination of the adjusted percentages showed that cohort members of Māori ethnicity reported higher levels of exposure to inter-parental violence than non-Māori after adjustment for socio-economic factors and family functioning factors.

Table 3 Adjusted Percentages for Measures of Exposure to: Sexual Abuse, Physical Punishment and Inter-parental Violence, by Ethnicity, after Controlling for Socio-economic Factors and Both Socio-economic and Family Functioning Factors

Exposure to abuse	Exposure level	Percentages adjusted for socio-economic ¹ factors		Percentages adjusted for socio-economic & family functioning ² factors	
		Māori	Non-Māori	Māori	Non-Māori
Sexual abuse	0	84.9	85.4	85.7	85.4
	1	3.0	2.9	2.8	2.9
	2	5.4	5.3	5.2	5.3
	3	6.7	6.4	6.3	6.4
		$\chi^2(1) = 0.02, p > .90$		$\chi^2(1) = 0.01, p > .90$	
Physical punishment	0	2.4	4.3	2.5	4.4
	1	70.8	78.8	71.9	78.7
	2	16.4	10.9	15.8	10.9
	3	10.4	6.0	9.8	6.0
		$\chi^2(1) = 7.50, p < .01$		$\chi^2(1) = 6.09, p < .05$	
Inter-parental violence	0	42.9	56.8	47.2	56.2
	1	24.5	21.5	23.6	21.3
	2	18.9	13.4	17.3	13.8
	3	13.7	8.3	11.9	8.7
		$\chi^2(1) = 7.82, p < .01$		$\chi^2(1) = 3.40, p < .10$	

1 Significant ($p < .05$) covariate factors: maternal age, socio-economic status at birth, maternal education level, and family living standards.

2 Significant ($p < .05$) covariate factors: parental alcohol problems, parental illicit drug use, parental offending, and changes of parents (to age 15).

Adjustments for Cultural Identity

It could further be suggested that the results presented in Table 3 could be accounted for by differences in cultural identity. Specifically, it is possible that differences in Māori cultural identity may account for the elevated rates of exposure to physical punishment and inter-parental violence among Māori cohort members. In order to examine this issue, those cohort members reporting Māori ethnicity were classified into two groups: those reporting sole Māori cultural identity ($n = 52$) and those reporting Māori cultural identity ($n = 62$) in addition to another ethnic identity. The analyses presented in Table 2 were repeated using the

three-group classification of cultural identity (sole Māori, Māori/other identity, non-Māori) in place of the two-group measure of ethnicity, using design variates to represent the three cultural identity groups. The results of these analyses are presented in Table 4 which shows the adjusted percentages for each abuse exposure classification outcome measure for the three cultural identity groups, after adjustment for both socio-economic and family functioning factors. The table also reports the overall significance test for cultural identity, derived from chi-square tests from the ordinal logistic regression models. The table shows the following.

- After adjustment for confounding factors, there was no significant main effect for cultural identity on the measure of exposure to sexual abuse ($p > .05$). Planned comparisons confirmed that there were no statistically significant differences between any of the three cultural identity groups ($p > .05$). However, the adjusted percentages suggest that rates of exposure to sexual abuse were lower among the sole Māori group than in the Māori/other or non-Māori groups.
- After adjustment for socio-economic and family functioning factors, there was a significant association between cultural identity and exposure to childhood physical punishment ($p < .05$). Planned comparisons revealed that cohort members of sole Māori cultural identity reported significantly ($p < .05$) higher rates of exposure to physical punishment than non-Māori. However, those of Māori/other cultural identity reported rates of exposure to physical punishment that were not significantly different ($p > .05$) from either sole Māori or non-Māori.
- After adjustment for socio-economic and family functioning factors, there was a significant main effect for cultural identity ($p < .01$). Planned comparisons showed that those cohort members of sole Māori cultural identity reported significantly ($p < .05$) higher rates of exposure to inter-parental violence than either those of Māori/other cultural identity or non-Māori.

Table 4 Adjusted Percentages for Measures of Abuse Exposure, by Cultural Identity, after Controlling for Both Socio-Economic Status and Family Functioning

Exposure to abuse	Exposure level	Cultural identity		
		Sole Māori	Māori/other identity	Non-Māori
<i>Sexual abuse</i>	0	88.7	83.4	85.5
	1	2.3	3.1	2.8
	2	4.0	6.0	5.2
	3	5.0	7.5	6.5
		$\chi^2 (2) = 0.85, p > .60$		
<i>Physical punishment</i>	0	2.1	3.1	4.4
	1	68.1	75.0	78.8
	2	17.9	13.8	10.9
	3	11.9	8.1	5.9
		$\chi^2 (2) = 7.47, p < .05$		
<i>Inter-parental violence</i>	0	32.8	58.2	56.2
	1	24.5	20.8	21.4
	2	23.3	13.1	13.9
	3	19.4	7.9	8.5
		$\chi^2 (2) = 11.93, p < .01$		

Supplementary Analyses

It could be argued that the results presented above were dependent on the fact that the ethnicity categories were measured at a single point in time, and that shifting patterns of self-reported ethnicity may affect the associations between ethnicity/cultural identity and abuse

exposure (see Methods). In order to address this issue, the analyses reported above were repeated using both: ethnicity/cultural identity categories based on self-reported data obtained when the respondents were aged 25 years; and ethnicity/cultural identity categories based on mother-reported data when the respondents were aged 14 years (see Methods). In both cases, the results of the analyses were congruent with those reported above, suggesting that the associations between ethnicity/cultural identity and abuse exposure were robust to variations in self-reported ethnicity.

It could further be argued that abuse exposure in childhood may be influenced by environmental factors rather than factors pertinent to the individual. That is, it may be the case that abuse exposure was a function of the ethnicity/cultural identity of the parents of cohort members, rather than the ethnicity/cultural identity of the cohort member (see Methods). In order to examine this issue, the analyses reported above were repeated using ethnicity/cultural identity categories based on:

- the mother's self-reported ethnic identity when the respondent was aged 14 years
- the father/partner's self-reported ethnic identity when the respondent was aged 14 years
- a combination of maternal and paternal (or partner's) ethnic identity classified into three groups: (i) Māori only; (ii) mixed Māori/other identity; and (iii) non-Māori.

In each case, the results of the analyses were congruent with those reported above, suggesting that the associations between ethnicity/cultural identity and abuse exposure were similar, irrespective of whether they were based on the ethnicity/cultural identity of the respondent or the respondent's family.

DISCUSSION

In this paper we have used data gathered over the course of the CHDS to examine the relationship between ethnicity and exposure to childhood maltreatment. The key findings of this analysis and their implications are reviewed below.

Ethnic Disparities in Rates of Childhood Maltreatment

Although it is widely believed that Māori children are at increased risks of all types of maltreatment, the results of this study do not support that view. Specifically, although young Māori adults reported more childhood physical abuse and exposure to inter-parental violence, rates of reported childhood sexual abuse were similar for Māori and non-Māori. This finding is not consistent with previous reports of higher rates of sexual abuse for Māori (Adolescent Health Research Group 2004, Ministry of Social Development 2002, 2004, Lievore et al. 2007).

The reasons for this difference are not clear, but it may be due to sample selection factors. The recent study conducted by Fanslow and colleagues (2007), for example, whereby Māori women were twice as likely to self-report having experienced child sexual abuse than non-Māori women, used a selected sample that was not representative of the population in general. In contrast, the CHDS results are based on a representative birth cohort of children born in Christchurch in 1977. It may be that these different sampling methods account for the discrepancy in conclusions about the links between ethnicity and childhood sexual abuse. A further plausible explanation for the divergence in findings is that there may be an over-reporting by child care and protection agencies of cases of child sexual abuse involving

Māori children because Māori families are more likely to come to the attention of these agencies. This explanation remains speculative, however, and requires further examination.

Although there was no detectable association between ethnicity and child sexual abuse, young Māori people reported far greater exposure to physical maltreatment and inter-parental violence than did non-Māori respondents. For example, 14% of Māori respondents reported being exposed to harsh and abusive punishment compared to 5.5% of non-Māori. Similarly 20.9% of Māori children came from families with a high level of reported inter-parental violence compared to 7.2% of non-Māori. These figures suggest that Māori had rates of exposure to physical child abuse and inter-parental violence that were approximately three times higher than non-Māori. Such findings are comparable to those of other studies, which have shown links between the over-representation of ethnic minorities in prevalence rates of child maltreatment and children from these groups being more exposed to strict parenting styles, including harsher punishment regimes (Ibanez et al. 2006, Haskett et al. 2008).

The Role of Socio-Economic Factors and Family Functioning

As would be expected from existing literature that reports on ethnic disparities in New Zealand (Fergusson 2003, Ministry of Social Development 2004, 2007, Marie et al. 2008a, 2008c, 2008d), young Māori people were more often reared in socio-economically disadvantaged home environments and had greater exposure to various forms of family adversity, including: the young age of the parents, parental criminality and substance use, and higher rates of family change. Statistical adjustment for these adversities reduced the size of the associations between ethnicity and exposure to physical abuse and inter-parental violence, but did not completely eliminate the differences.

There are two explanations for the failure of controlling for socio-economic and family factors to account for ethnic disparities in childhood maltreatment. The first explanation is that, of necessity, control for these factors was incomplete and it may be that covariate factors were omitted, which, if included in the analysis, would have explained the ethnic differences in rates of childhood maltreatment. The alternative explanation is that ethnic disparities in rates of maltreatment after adjustment for socio-economic and family factors reflect the role of cultural factors in determining rates of childhood maltreatment.

The Role of Cultural Identity

To explore the possible role of cultural identity in mediating associations between ethnicity and childhood maltreatment, the group of Māori respondents was subdivided into those of sole Māori identity and Māori/other identity. The data were then re-analysed to examine the premise underlying current theories in New Zealand that claim that strength of Māori cultural identity mitigates the risk of young Māori people being exposed to child maltreatment. Following adjustment for socio-economic and family functioning factors, this re-analysis revealed a complex set of relationships between cultural identity and risks of childhood maltreatment.

In terms of childhood sexual abuse, those of sole Māori identity had the lowest adjusted rate of exposure. Although these differences failed to reach statistical significance, the findings provide some support for the view that being of sole Māori identity may be a protective factor that reduces risks of exposure to childhood sexual abuse. However, quite the opposite pattern was observed for exposure to childhood physical abuse and exposure to inter-parental

violence, with those of sole Māori identity being at greater risks of these outcomes. The results suggest that sole Māori identity may be a risk factor for exposure to physical child abuse and inter-parental violence. The findings are in general agreement with research by Kukutai (2003), who suggested that the degree to which an individual identifies with Māori cultural identity may be associated with increased risks of social and economic disadvantage.

These findings, however, are not consistent with the assumptions underpinning influential theories, social policies and a number of intervention guidelines (Department of Social Welfare 1988, Ministry of Social Development 2002, Balzer et al. 1997, Stanley and Thompson 1999, Kiro 2000, Stanley 2000, Kruger et al. 2004), which claim that strengthening Māori identity and links with traditional Māori cultural practices will lead to reduced rates of child abuse among Māori. To the contrary, while the findings of this study suggest that this approach may lead to reduced risks of childhood sexual abuse, it may also be associated with increased risks of childhood physical abuse and exposure to inter-parental violence. These findings do pose a challenge to current policies aimed at reducing the over-representation of Māori children in rates of child maltreatment, which emphasise “identity interventions” that are not evidence-based and are largely ideologically driven. Even though such policies are no doubt well intentioned and observe statutory requirements unique to the New Zealand context, following the view expounded by UNICEF (2003, 2007), they must be exposed to ongoing critical scrutiny and empirical evaluation.

Strengths and Limitations

Like all research, this study has a number of strengths and limitations. Strengths of the research include: comprehensive evaluation of exposure to maltreatment using repeated measures gathered at 18 and 21 years; prospective collection of data on socio-economic and family factors; evaluation of both ethnicity and cultural identity; and high levels of cohort retention. No New Zealand study of child maltreatment has had all of these features.

However, the study also has a number of limitations. First, the data were gathered on a specific cohort, born in a specific region of New Zealand and studied over a specific historical period. There is no guarantee that findings from this cohort will generalise to other cohorts or geographical contexts. In particular, all members of this cohort were born in the South Island, and the extent to which the findings of this study can be generalised to the New Zealand population is unclear. In addition, the number of Māori studied ($n = 114$) was relatively small, limiting the precision of the analysis. Similarly, while it may have been of some interest to conduct parallel analyses examining the outcomes of those individuals reporting other ethnic affiliations, the number of participants in the present cohort indicating additional affiliations was too small to allow comparative analyses. Also, it could be argued that respondents may have had differing motivations for answering the questions regarding ethnicity, which may have affected their responses. However, while this issue might also have been of interest, identifying the motivations that influenced individuals changing their ethnic identification over time was not the objective of this study. Finally, ethnicity data concerning spouses and partners, and other members of social networks, were not obtained, limiting the scope of the present analyses to the ethnicity of the respondent and the parents of the respondent.

REFERENCES

- Adolescent Health Research Group (2004) *Te Ara Whakapiki Taitamariki: Māori Specific Findings of Youth2000, a National Secondary School Youth Health Survey*, University of Auckland, Auckland.
- Baldwin, K. (2008) "Nominated ethnicity changes of students from secondary to tertiary education: Secondary to tertiary transitions" paper presented to *Who Are We: Ethnicity and Identity* seminar, 3 September, Statistics New Zealand, Wellington.
- Balzer, R., D. Haimona, M. Henare and V. Matchitt (1997) *Māori Family Violence in Aotearoa*, Ministry of Māori Development / Te Puni Kōkiri, Wellington.
- Boden J.M., L.J. Horwood and D.M. Fergusson (2007) "Exposure to childhood sexual and physical abuse and subsequent educational achievement outcomes" *Child Abuse & Neglect*, 31: 1101–1114.
- Broughton, J., D.M. Fergusson, C. Rimene, L.J. Horwood and A. Sporle (2000) *Ngā Tini Aho o te Ao Hou: The Many Strands of Contemporary Māori Society: Māori Ethnicity and Identity in the Christchurch Health and Development Study*, NTMHRU, Dunedin.
- Callister, P., R. Didham, J. Newell and D. Potter (2007) "'Family ethnicity': Knitting a jumper using two woolly concepts" *Social Policy Journal of New Zealand*, 32:32–48.
- Chapple, S. (2000) "Māori socio-economic disparity" *Political Science*, 52:101–115.
- Cicchetti, D. and S.L. Toth (2005) "Child maltreatment" *Annual Review of Clinical Psychology*, 1:409–438.
- Collishaw, S., J. Dunn, T.G. O'Connor, J. Golding and the Avon Longitudinal Study of Parents and Children Study Team (2007) "Maternal childhood abuse and offspring adjustment over time" *Development and Psychopathology*, 19:367–383.
- Cross, T.A., K.A. Earle and D. Simmons (2000) "Child abuse and neglect in Indian country: Policy issues" *Families in Society*, 81: 49–58.
- Daignault, I.V. and M. Hebert (2004) "The school adaptation of sexually abused children" *Canadian Psychology*, 45:293–307.
- Department of Social Welfare (1988) *Pūao-Te-Ata-Tū Report of the Ministerial Advisory Committee on a Māori Perspective*, New Zealand Government, Wellington.
- Duran, B., L. Halinka Malcoe, M. Sanders, H. Waitzkin, B. Skipper and J. Yager (2004) "Child maltreatment prevalence and mental disorders outcomes among American Indian women in primary care" *Child Abuse & Neglect*, 28:131–145.
- Elley, W.B. and J.C. Irving (1976) "Revised socio-economic index for New Zealand" *New Zealand Journal of Educational Studies*, 11:25–36.
- Fanslow, J.L., E.M. Robinson, S. Crengle and L. Perese (2007) "Prevalence of child sexual abuse reported by a cross-sectional sample of New Zealand women" *Child Abuse & Neglect*, 31:935–945.
- Fergusson, D.M. (2003) "Violent crimes: Assessing race and ethnic differences" in D.F. Hawkins (ed.) *Interpersonal Violence: The Ethnicity, Race and Class Nexus* (pp. 138–153), Cambridge University Press, Cambridge, UK.
- Fergusson, D.M. and L.J. Horwood (1998) "Exposure to interparental violence in childhood and psychosocial adjustment in young adulthood" *Child Abuse & Neglect*, 22:339–357.
- Fergusson, D.M. and L.J. Horwood (2001) "The Christchurch Health and Development Study: Review of findings on child and adolescent mental health" *Australian and New Zealand Journal of Psychiatry*, 35:287–296.
- Fergusson, D.M., L.J. Horwood and M.T. Lynskey (1996) "Childhood sexual abuse and psychiatric disorder in young adulthood, II: Psychiatric outcomes of childhood sexual

- abuse" *Journal of the American Academy of Child & Adolescent Psychiatry*, 35:1365–1374.
- Fergusson, D.M., L.J. Horwood and F.T. Shannon (1982) "Family ethnic composition, socio-economic factors and childhood disadvantage" *New Zealand Journal of Educational Studies*, 17:171–179.
- Fergusson, D.M., L.J. Horwood, F.T. Shannon and J.M. Lawton (1989) "The Christchurch Child Development Study: A review of epidemiological findings" *Paediatric & Perinatal Epidemiology*, 3:278–301.
- Fergusson, D.M. and M.T. Lynskey (1997) "Physical punishment/maltreatment during childhood and adjustment in young adulthood" *Child Abuse & Neglect*, 21:617–630.
- Fergusson, D.M., M.T. Lynskey and L.J. Horwood (1996) "Childhood sexual abuse and psychiatric disorder in young adulthood: I. Prevalence of sexual abuse and factors associated with sexual abuse" *Journal of the American Academy of Child & Adolescent Psychiatry*, 35:1355–1364.
- Freisthler, B., D.H. Merritt and E.A. LaScala (2006) "Understanding the ecology of child maltreatment: A review of the literature and directions for future research" *Child Maltreatment*, 11:263–280.
- Gordon, S. (2006) "Cultural conceptualisation of child abuse and responses to it: An aboriginal perspective" *Social Policy Journal of New Zealand*, 28:18–35.
- Haskett, M.E., J.C. Allaire, S. Kreig and K.C. Hart (2008) "Protective and vulnerability factors for physically abused children: Effects of ethnicity and parenting context" *Child Abuse & Neglect*, 32: 567–576.
- Ibanez, E.S., J. Borrego Jr, J.R. Pemberton and S. Terao (2006) "Cultural factors in decision-making about child physical abuse: Identifying reporter characteristics influencing reporting tendencies" *Child Abuse & Neglect*, 30:1365–1379.
- Keddell, E. (2007) "Cultural identity and the Children, Young Persons, and their Families Act 1989: Ideology, policy and practice" *Social Policy Journal of New Zealand*, 32:49–71.
- Kiro, C.A. (2000) "Assessing the impact of the economic reforms on Māori tamariki and rangatahi" in A. Smith, M. Gollop, K. Marshall and K. Marsh (eds.) *Advocating for Children: International Perspectives on Children's Rights*, University of Otago Press, Dunedin.
- Kotch, J.B., D.J. Chalmers, J.L. Fanslow, S. Marshall and J.D. Langley (1993) "Morbidity and death due to child abuse in New Zealand" *Child Abuse & Neglect*, 17:233–247.
- Kruger, T., M. Pitman, T. McDonald, D. Mariu, A. Pomare, T. Mita, et al. (2004) *Transforming Whanau Violence: A Conceptual Framework* (2nd ed.), Ministry of Māori Affairs, Wellington.
- Kukutai, T. (2003) *The Dynamics of Ethnicity Reporting: Maori in New Zealand*, Ministry of Maori Development / Te Puni Kōkiri, Wellington.
- Lievore, D., P. Mayhew and E. Mossman (2007) *The Scale and Nature of Family Violence in New Zealand: A Review and Evaluation of Knowledge*, Crime and Justice Research Centre, Wellington.
- Mansell, J. (2006) "The underlying instability in statutory child protection: Understanding the system dynamics driving risk assurance levels" *Social Policy Journal of New Zealand*, 28:97–132.
- Marie, D., D.M. Fergusson and J.M. Boden (2008a) "Cultural identity and pregnancy/parenthood by age 25: Evidence from a New Zealand birth cohort" *Social Policy Journal of New Zealand* (under review).

- Marie, D., D.M. Fergusson and J.M. Boden (2008b) "Educational achievement in Māori: The roles of cultural identity and social disadvantage" *Australian Journal of Education*, 52:183–196.
- Marie, D., D.M. Fergusson and J.M. Boden (2008c) "Ethnic identity and intimate partner violence in a New Zealand birth cohort" *Social Policy Journal of New Zealand*, 33:126–145.
- Marie, D., D.M. Fergusson and J.M. Boden (2008d) "Links between ethnic identification, cannabis use and dependence, and life outcomes in a New Zealand birth cohort" *Australian and New Zealand Journal of Psychiatry*, 42:780–788.
- Ministry of Social Development (2002) *Te Rito: New Zealand Family Violence Prevention Strategy*, Ministry of Social Development, Wellington.
- Ministry of Social Development (2004) *Children and Young People: Indicators of Wellbeing in New Zealand*, Ministry of Social Development, Wellington.
- Ministry of Social Development (2006) *Children at Increased Risk of Death from Maltreatment and Strategies for Prevention*, Ministry of Social Development, Wellington.
- Ministry of Social Development (2007) *The Social Report*, Ministry of Social Development, Wellington.
- Moisan, P.A., K. Sanders-Phillips and P.M. Moisan (1997) "Ethnic differences in circumstances of abuse and symptoms of depression and anger among sexually abused black and Latino boys" *Child Abuse & Neglect*, 21:473–488.
- Mullen, P.E., N.J. King and B.J. Tonge (2000) "Child sexual abuse: An overview" *Behaviour Change*, 17:2–14.
- Noll, J.G., C.E. Shenk and K.T. Putnam (2008) "Childhood sexual abuse and adolescent pregnancy: A meta-analytic update" *Journal of Pediatric Psychology*, 34: 366–378.
- Pihama, L., K. Jenkins and A. Middleton (2003) "*Te Rito*" *Action Area 17 Literature Review: Family Violence for Māori Research Report*, Auckland Uniservices Limited, Auckland.
- Pinto, A. (2006) "Seeds of tyranny" *Social Policy Journal of New Zealand*, 27:1–11.
- Pomare, E., V. Keefe-Ormsby, C. Ormsby, N. Pearce, P. Reid, B. Robson et al. (1995) *Hauora: Māori Standards of Health: A Study of the Years 1970–1991*, Te Rōpū Rangahau Hauora a Eru Pōmare / Eru Pōmare Māori Health Research Centre, Wellington.
- Ramey, C. and S. Landesman Ramey (1998) "Early intervention and early experience" *American Psychologist*, 53:109–120.
- Repetti, R.L., S.E. Taylor and T.E. Seeman (2002) "Risky families: Family social environments and the mental and physical health of offspring" *Psychological Bulletin*, 128:330–366.
- Salzinger, S., R.S. Feldman, D.S. Ng-Mak, E. Mojica and T.F. Stockhammer (2001) "The effect of physical abuse on children's social and affective status: A model of cognitive and behavioral processes explaining the association" *Development and Psychopathology*, 13:805–825.
- Sanders-Phillips, K., P.A. Moisan, S. Wadlington, S. Morgan and K. English (1995) "Ethnic differences in psychological functioning among black and Latino sexually abused girls" *Child Abuse & Neglect*, 19:691–706.
- Stanley, G. (2000) "Cultural dilemmas, cultural realities" *Social Work Now*, August: 32–41.
- Stanley, G. and R. Thompson (1999) "The dynamics of risk in iwi-based child protection practice" *Social Work Now*, December: 51–59.
- StataCorp (2003) *Stata Statistical Software: Release 8.0*, Stata Corporation, College Station, TX.

- Statistics New Zealand (2002) *Census Snapshot: Māori*, Statistics New Zealand, Wellington.
- Straus, M. (1979) "Measuring intrafamily conflict and violence: The conflict tactics (CT) scale" *Journal of Marriage & the Family*, 41:75–88.
- Tolan, P., D. Gorman-Smith and D. Henry (2006) "Family violence" *Annual Review of Psychology*, 57:557–583.
- UNICEF (2003) *A League Table of Child Maltreatment Deaths in Rich Countries: Innocenti Report Card No 5, September 2003*, UNICEF Innocenti Research Centre, Florence.
- UNICEF (2007) *Child Poverty in Perspective: An Overview of Child Well-being in Rich Countries, Innocenti Report Card 7, 2007*, UNICEF Innocenti Research Centre, Florence.
- Woodward, L.J., D.M. Fergusson and L.J. Horwood (2001) "Risk factors and life processes associated with teenage pregnancy: Results of a prospective study from birth to 20 years" *Journal of Marriage and the Family*, 63:1170–1184.
- Wynd, D. (2006) *Violence Against Children: Domestic Violence and Child Homicide in New Zealand*, Discussion Paper, Child Poverty Action Group (Inc), Auckland.
- Zielinski, D.S. and C.P. Bradshaw (2006) "Ecological influences on the sequelae of child maltreatment: A review of the literature" *Child Maltreatment*, 11:49–62.

**TACKLING THE EFFECTS OF NEOLIBERALISM?
INTEGRATING SERVICES AT BARNARDOS NEW ZEALAND**

Hal B. Levine
Cultural Anthropology
Victoria University of Wellington

Abstract

Like most voluntary organisations, Barnardos New Zealand has faced a number of challenges as a result of changes in the way the Government funds social services. It found itself in economic difficulties as it scrambled for contracts and faced real doubts that the organisation would be able to sustain its founding mission of providing welfare services for children in New Zealand. Led by a new chief executive (CEO), Barnardos began an ambitious programme of renewal by integrating services. Seen as a way of countering fragmentation, service integration has a long history but an ambiguous record of success in bringing about its desired ends. This paper, based on interviewing and focus groups, looks at integrated services from the perspective of staff at Barnardos New Zealand. It reports their views on whether this particular restructuring exercise is something worth doing, how it is happening and how to advance it further. The article uses Bourdieu's critique of neoliberalism to put some of the doubts and expectations regarding integrated services here into a wider context. Uncertainties notwithstanding, service integration still has considerable appeal.

BACKGROUND

New Zealand ... has gone the furthest toward a contract state model and it is here where the transformation of third sector voluntary organisations into agents of the state is no longer simply a theoretical issue. The New Zealand Department of Social Welfare has: reduced its direct role in service delivery, increased its use of voluntary agencies, and altered its existing relationship with the voluntary sector by abandoning a grant model of funding and adopting a contract model. This has led to a more accountable system and more delivery at the community level, but has been criticized for the burdensome nature of the accountability regime and the failure to adequately protect and nurture the unique qualities of voluntary agencies. (Evans and Shields 2006, citing Canada West Foundation)

Barnardos New Zealand is one of those voluntary agencies whose unique qualities have changed. In fact they changed to such an extent during the advance of the "contract state" that the organisation began to falter. Informants told me that it was losing both money and its sense of purpose when the founding CEO retired.

Describing itself as the country's leading welfare agency for children and families, Barnardos was established in New Zealand in 1972. By that stage the parent organisation in Britain had provided homes for destitute children for over a hundred years, and set up branches in Canada, Ireland, Australia and New Zealand when poor British children were sent overseas. Barnardos New Zealand runs a raft of programmes locally, including family counselling, support, homes, a parent helpline, social workers in schools, a supervised contact service, treatment centres for adolescents involved with sexual abuse, after-school care programmes, home-based child care and crèches. Its \$40 million expenditure is funded by fees for some services, public donation, and contracts from the Ministry of Education and Child Youth and Family (Barnardos New Zealand 2008). With a new CEO appointed in 2003, Barnardos

began to reconfigure itself, embarking on a programme of planned renewal in 2006. The first goal listed in the organisation's change document (Barnardos New Zealand 2006) is to "Develop and implement an integration plan for all Barnardos services".

The idea that a coordinated approach to clients of welfare and service organisations would serve them better than a series of disconnected programmes has a long history. It became a central facet of Lyndon Johnson's great society initiative in the 1970s. As plausible as the idea sounds, it was never evaluated adequately or shown to have benefits for clients.¹ Despite this lack of evidence that service integration has any real value, it reappeared as a central issue in policy debates in the 1990s because it seemed so necessary to control the fragmentation caused by privatising and contracting social services (Milward 1995).

This paper looks into the programme of planned change by means of integrating services at Barnardos New Zealand. It focuses especially on how service integration is seen by staff in the context of recent changes in internal and external conditions. What is particularly interesting is that some staff say integrating services is a fundamental change, designed to bring Barnardos back to its roots as a cohesive child-centred charitable organisation, while others are more sceptical and view it as a management tool to better cope in the new environment. Indeed, there is room for doubt over what service integration is designed to accomplish.

Bourdieu says that people involved in administering and delivering social services experience the contradictions of neoliberalism most directly. "The left hand of the state", those who spend money on hard-won social programmes, is opposed to, and by, the technocrats of finance ministries and banks, comprising the state's "right-hand". Sent to the front to repair the damage of market-led policy, he asks how the constituents of this weak side could "not have the sense of being constantly undermined or betrayed?" (1998b:3). Subject to restructuring, line management, performance appraisals, contracts, audits, competition – the full panoply of mechanisms designed to make alternatives to its "reforms" impossible – how could Barnardos cope with neoliberalism? This paper argues that despite the reasonable doubts held by some staff, and by scholars who have examined service integration more generally, it constitutes a real attempt by Barnardos New Zealand to survive neoliberalism by tackling the forces that undermine the coherence, internal solidarity and mission of the organisation.

RESEARCH AT BARNARDOS NEW ZEALAND

People working for Barnardos have a vision of what the organisation stands for, what it does and how it should work. They obtain that vision from a variety of sources – personal, professional and organisational. The research this paper draws upon consists of interviews with a variety of Barnardos staff who articulated their thoughts on organisational development and change to me, and attendance at organisational meetings at Taita House and a management "road show" about integrated services in Wellington. A reference group of interested management staff in Wellington oversaw the research. We met regularly over the

¹ Gray's review of the literature indicates that service integration benefits "tend to accrue to participating agencies in the form of improved processes, better relationships and a clearer sense of direction" (2003:38). Her report also suggests service quality is affected by the positive climate of service providers. So it seems that integrating services can help children and families indirectly by motivating service providers to improve the quality of their programmes.

course of the project (almost two years) to evaluate results and plan future directions. Barnardos staff were uniformly supportive and helpful at all phases of this research.

I interviewed 17 people for about an hour each at Barnardos offices in Wellington, Lower Hutt, Auckland, Manukau and Hamilton, and conducted two-hour focus group sessions in Wellington, Porirua, Lower Hutt, Manukau and Palmerston North, with five or six staff in each group. These loosely structured interviews and focus group discussions explored perspectives on Barnardos's direction and its current situation. We also talked about whether staff perceived the need for this change to be genuine, or saw it as imposed by senior management from Barnardos head office in Wellington. In the course of these discussions a picture emerged of a group of people who were united by their commitment to children but simultaneously divided by professional allegiances, organisational dynamics, and the requirements of government funding and auditing of their programmes.

In addition to these activities with Barnardos staff, I interviewed two clients (fewer than hoped) and two Ministry officials recommended by Murray Edridge, Barnardos's CEO. I also visited a number of early childhood centres, where I talked to staff, and a home for adolescent sexual offenders.

Although my sample was not representative, it did cover the views of a number of individuals in a range of situations sufficient to discover the main themes that integrated services raised for the organisation. A summary report was provided to Barnardos, who gave feedback on its contents and the CEO gave permission to release the data collected for publication without further monitoring.

WHY INTEGRATE SERVICES?

I asked interviewees why they thought integration had become such a high priority at this particular time. One manager said there had been "lots" of restructuring over the years, driven by growth in contracts, but problems kept surfacing nonetheless:

"It's endless, Hal. I've lost count of how many times I've been restructured. I've had five titles and five different responsibilities in five years. We grew very rapidly. I was an area manager for three years and split the unit three times in three years because we were growing so fast. One lot was coping with that growth ... A second lot was around how we managed. We had the same CEO for 27 years. Like many people in a position where you grow something from nothing to something very big, he had to change his leadership style and the structure had to change. And then we got a specialist contract for residential services for high-risk kids, which ... required more expertise than we had before. Ian (the long time former CEO) brought that [programme] from England with nothing. It wasn't an area of expertise [for] this organisation and how he managed to get the government to get Barnardos to set that up is beyond me. It's the best facility in the country for at-risk kids. Ian fought every step of the way to get the best for those kids ... It's probably the most important work that we are doing in terms of the future safety of children in New Zealand ... So we went down a pathway of restructuring. Then we went through a period of new people coming ... the leadership changing. The organisation was in some financial difficulty. There was a need to rethink if we'd be there in the long term."

A staff member in the national office expressed some scepticism that this particular effort would do anything fundamental to change the way Barnardos operates. Nor did he expect from the integration efforts he had experienced thus far that it would come to have more benefit for clients:

“What frustrates me is that for some [people who work in Barnardos] integration is just seen as putting things together. Or all in one place, but they are still the same services and people. But it’s to think how putting things together might create something different ... It’s not inherent in how we work or what we do. It’s not ‘let’s start with getting a good start with understanding the needs of the family and how we can meet those needs’ ... I haven’t heard anyone talking creatively about how we fund our services. We don’t pool our funding in any kind of creative way. Each discrete bit of what they are funded for is funded in that discrete bit. I can understand that that’s about needing to account, and they are all from different agencies, but, as an agency that has significant fund-raising income and discretion about where we put that income, we haven’t thought about how we could create increased flexibility about how we could respond to family needs ... We top up, but we don’t apply that money creatively to wrap services together.”

The goals of working together rather than separately and creating new and more effective programmes while remaining flexible seem to be widely shared. Some people relish the opportunity to change in this way but are not sure that all in the organisation are comfortable with the streamlining of management this requires, or that the structure currently in place can accomplish something really meaningful. A manager in Auckland said that for some people it is “scary”. A few individuals did feel a need for a clearer idea of what they were supposed to be doing and more direction in how to go about integrating services.

Another aspect of integration and its meaning is that it entails a return to how Barnardos operated in the past. When the organisation was smaller and had a less diverse range of programmes, people worked together and coordinated their activities in a natural way. This still happens in smaller centres, but it is difficult to achieve in a larger, more diverse Barnardos that competes for contracts in a market-oriented voluntary sector.

FACTORS THAT INHIBIT INTEGRATING SERVICES

Atwool (2003) highlights the major difficulties that confront services integration in the context of recent government-supported initiatives in New Zealand. The Agenda for Children, Te Rito New Zealand Family Violence Strategy, Youth Development Strategy Aotearoa, Care and Protection Blueprint, High and Complex Needs, and Strengthening Families “are based on interagency cooperation and partnerships between State funded services, third sector organisations and families. All contain Action Plans that use the language of partnership, cooperation, and integration. The Government’s Agenda for Children ... promotes a whole child approach which clearly cannot be achieved without integrated service delivery” (2003:31). There are, however, substantial barriers to making integration work. Atwool identifies a “lack of communication between policy, organisation and intervention levels” (2003:32), a focus on output classes for government contracts, and the “silo mentality” of competing government departments. The non-government organisations (NGOs) and government departments that are supposed to cooperate are simultaneously competing for funding and operating independently of one another.

Some of the adaptations of Barnardos to the realities of this situation resulted in a fragmentation of programmes and services that, like the more general situation mentioned in the quote by Milward above, made the need for increasing integration so apparent and appealing. Staff who have been with the organisation for a long time gave personal examples of how unity in the organisation had declined during their tenure. One person working in the area of foster care said that originally all clients’ children used Barnardos childcare:

“And I came to all their play groups and introduced myself. If the coordinator in Kidstart saw a family that needed my services she would refer them. That was ten years ago and I suppose that’s what they’re getting back into today. We had it in the past. What stopped it was that Barnardos funded that service [from sources other than contracts] and was looking for outside funding ... We would ring up Access [an inside division] if we felt a family needed some services. But I don’t see us using it that way anymore now.”

Indeed, another staff member said that Barnardos is moving further away from integration despite clear messages to the contrary from the CEO. He said this is a result of the rebranding of the early childhood services. The new brand, Kidstart, was designed to widen the market for Barnardos services in an increasingly competitive childcare market by changing the perception that their target audience consisted of mainly underprivileged clients. The problem seems fundamental, as the CEO acknowledged in our interview. Home-based care started out as a social service for needy parents, and developed into an early childhood business after it came under the oversight of the Ministry of Education. Different professional expectations and standards for early childhood teaching added more funding streams for the more diverse programmes Barnardos ran and drove a wedge between those that are commercial and education-based, like Kidstart, and the more social-work oriented initiatives. This division “creates competition between the services”, but clients’ needs are often multifaceted and transcend such divisions:

“Theoretically, when they go to Family Support they are meant to have a plan, meant to know what the goals are. They’re supposed to have a plan bringing in the other services outside of Barnardos to provide that. Unfortunately, they can’t come to us for care, because we only take referrals from Child Youth and Family. However, there’s no reason why that couldn’t happen if somebody funded us. If Barnardos had funding for their Family Support service so that it funds respite care we would work in an integrated way. Either we would be key worker or Family Support would be a key worker. We would say Barnardos foster care is providing respite care, she will go to budget advice there, put the package together and we would be part of it.”

“If families come through Family Support there is recognition that there is a need, but looking at the early childhood services how do you recognise there is a need and approach parents in a way that’s non-confrontational non-judgemental and doesn’t appear to scrutinise them and makes people feel it’s okay to get involved in these services?”

“We shouldn’t be competing; we should be collaborating. One of the difficulties [is that] the two services have different fee structures that create a barrier for parents going from one to the other because they get two separate bills. In this day and age services should come under the one bill, but we can’t.”

Social workers, counsellors and teachers work to different professional codes, and their contracts often demand different performance measures. Reporting to an outside agency on a specifically defined aspect of child welfare can undermine the unifying focus of a child-centred outlook contributing to the fragmentation discussed above. One staff member had very little to do with anyone outside her immediate unit:

“I’m not sure that most of my services can be integrated. The services are run as specialist social-work-only services. [Interviewee describes how the service being discussed is limited by contract to providing immediate care for the children, not having anything to do with what happens to them further down the track.] For demand management we don’t carry any of our recommendations through. A lot of the services we might want to involve are not services Barnardos runs, like drug and alcohol treatment, women’s refuge. We might suggest our programmes, where appropriate, but at the end of the day it’s not our choice.”

A number of complaints were voiced about how hierarchical Barnardos is. Managers are not accessible enough, nor are they familiar with what is happening on a day-to-day level. For example:

“Few people have hands-on experience at all. The lack of awareness. They know the policy. We actually take care of a lot of Māori children, but I was at a meeting where they said oh!, iwi social services won't apply to you because you don't take care of Māori children.”

Managers also have problems connecting up staff doing such widely diverse jobs:

“I don't have one day when they are all working at the same time. That's one of the barriers for Barnardos within itself. And the capacity is limited by the fact that, for example, the child psychotherapist is only here 10 hours a week. We offer great services on small hours with part-time staff. We don't get to know our colleagues out there in the communities and in the wider Barnardos because we just don't have that contact with them other than on a PC, and it's just not the same. Here in Auckland this was the mother centre, the hub where everything started happening, until we had all these other offices and things like that and there isn't just that personal contact anymore other than being on a PC, and we do get together every once in a while when we feel it's needed.”

“There are so many different services provided, and that's what brings on the fragmentation. You have education and family services and we have children [in] supervised contact and parent education. Now hopefully all the services in Manukau we can bring together with a lot of ... consultation with each other ... I can see a picture like that, but I can also see what's happened in the past – fragmentation because we're so busy just getting stuck into and doing our business and not having the time to consult wider to see how it can actually work.”

“There is some possessiveness of services that don't want others to come in. Ownership, patch protection. Integration should be about helping people out in the community, not our agenda. Before we can achieve integration people in the different services need to know what the organisation does and I don't think that is the case. I hear staff from other Barnardos services who don't know where to refer clients. We can't go to other communities if we don't have that knowledge internally. Not all staff know what we do as an organisation. Things have changed so much so some of us need to go back and revisit what others are doing. I have seen some staff in other parts of Barnardos using outside agencies when we are in here. Why is that happening? Our own internal website is so wishy-washy, outdated.”

The Ministry of Education move to make early childcare providers teachers, who follow a curriculum and assess performance, provides a specific illustration of how government policy has driven a wedge between social services and education, and this has caused problems for providers of home-based care. The women who are now providing educational services say that prior to the formation of Kidstart they felt like mothers who volunteered to look after children in their homes. Now they have been turned into Kidstart contractors, who have to chart the children's educational progress yet get paid very little for their new professional role as educators. These women said they felt comfortable with their former role as volunteers who did mothering, but they bridle at being turned into teachers:

“The writing we do is basically what a kindergarten teacher used to do. For example, if a child is on the bus I could just say she went on the bus. But they want to know what she did on the bus and I really think that's not important ... Every Kidstart caregiver I've spoken to has the same issue with the books ... you often do it on your own time when you're not being paid. I write it down in a diary every night or sometimes in the morning

and the end of the week. I struggle with the babies. How do you write a learning story about a five or six-month-old baby? The book goes to the visiting teacher and the parent gets to see it. The purpose of this is to monitor and say they [Kidstart] are following the early childhood education guidelines.”

The various issues raised in this section on the factors that inhibit the development of integrated services at Barnardos show how general aspects of neoliberal restructuring play out in a specific organisational context. Discussing *The Essence of Neoliberalism*, Bourdieu (1998b:3–5) refers to repeated restructurings, autonomous divisions, individualised careers and performance appraisals as tools used to promote the reach of the market economy and destroy the groups that could resist its advance. This seems a good way to summarise what my various informants said works against integrating services at Barnardos. Although they are under considerable centrifugal pressure, integration is by no means seen as unattainable at Barnardos.

INTEGRATION IS HAPPENING

Staff who work in offices where they are in regular contact with their colleagues feel that, the aforementioned divisions notwithstanding, they are already operating in an integrated way:

“For me, for our two home-based services, it’s an easy answer. We are co-located so it’s pretty much as integrated as you could be. So, we see that if the parents need could be transferred from one to another service then that happens in terms of integration, because their friends are working with each other in the same team.”

“Integration is quite a new buzzword ... We have really good communication with other services ... Hopefully integrated services would just make it better ... networking, understanding people’s roles and qualifications.”

“[The team working with sexual offenders] must have found a way of overcoming professional differences. You have counsellors, psychiatrists, teachers, cooks, managers, administrators, social workers. How are they achieving that? Some of the smaller regional sites probably have worked in a really holistic wrap-around way.”

“We asked the parents what they want. They want an OSCAR [out of school care] service so we are working on putting one in. We have a contact service and want to widen out to a weekday service. We’re working with the medical centre next door to see what sort of services they want. We approached the dental services, who want to set up a preschool dental service. We’re setting up in Mangere what that community wants to support its children rather than what Barnardos sees as the need. Interestingly enough, we probably have a 50/50 split from the people involved on how we should do that ... What I’d rather see happen at Mangere is that there is no rule book. We’re going to have to make it up as we go along. We’ll make decisions based on what each child and individual family needs rather than what the book tells us we have to do. It’s a scary way for some staff to work.”

One service user appreciated how he was dealt with by Palmerston North Barnardos:

“It happens really quickly ... My boys benefited in a short period of time. They started with parenting courses and then assessed the boys. And it does happen so fast ... That tells me that that this place works. They have got good networks. They know these people.”

In Mangere, Hamilton, Palmerston North and the other centres where services are housed together, staff seem to have moved from querying the meaning of integration towards taking

steps to operationalise it. Although the process is in its very early stages, the individuals I interviewed who were working in these situations were enthusiastic about services integrating.

IDEAS TO INCREASE INTEGRATION FURTHER

Most of the comments from staff about how to increase integration further focused on communication between different staff and services, staff and clients, as well as with other organisations that work with children and families:

“When I’ve seen services work really well together it’s because there’s been a high level of trust between the staff involved and the client. We’ve almost got the directive (message). And now what we need is better communication between staff.”

“From what I’ve read about integrated services it works well when there is a high level of trust and respect and there is no competition for funding internally within the team.”

“If the relationships that we have with those other organisations, if we didn’t maintain those and have respect and value for what they do, we couldn’t integrate.”

“I think it’s really important to do what we can do well. Rather than little bits and pieces and pretending that we can be all things to one person, but to be the primary worker to make sure that all the things happen for a person to have that knowledge in the community. You offer integrated services within your community and go broader than just the organisation.”

These comments seem to correspond to recent Ministry of Social Development initiatives. The Ministry official I interviewed was prepared to assist with Barnardos moves in this direction. He recognised the various disincentives to integration and was involved in attempting to ameliorate them. The Ministry has set up a council of NGOs to facilitate cooperation, and Barnardos is a leading member of this group because of its reputation as a multifaceted provider of good-quality services:

“The community House in Taita – I’ve been out there and am aware of the exercise ... to explore the possibility of providing a community hub there. I said to him, “Well now, to my knowledge there is already a community house out in Taita. There may be other community organisations who feel threatened by you suddenly getting government funding to do something in here when there hasn’t been any dialogue ...” Murray committed to quite extensive consultation and dialogue ... with the community which is still ongoing, and what we’ve said is that if the community actually think that this is a good idea we’d be happy to support a one-stop shop concept in Taita. We’ve got enough money for 13 of these things in the next 12 months ... We quite like the concept of one-stop shops. They work best with collaboration between different NGOs and hopefully government agencies as well. Their success derives from a greater capacity to provide a seamless service. Murray’s keeping me up to date on the way it’s going. I have no doubt that they’re getting the community support. So it’s not an issue.”

Here is a similar view of integration at Barnardos from a manager at the Ministry of Education, the other major government department that funds some of their programmes for young children:

“The kind of advantage that Barnardos has integrating new services and making them available is that they have the opportunity to bring social supports as well as the benefits of universal education to their client groups, which is certainly something that is a strength of Barnardos and has been well appreciated for families. Their ability to take

what's out there and make the best use of it and integrate it. There is a huge advantage of having younger children in their services. When the children are in early childhood you have to be there to drop them off and pick them up. You must have contact with that service. It provides a huge opportunity for integrated services, or the services like Barnardos to have discussions with parents about any range of other things ... that might not be directly about the child. The Te Whariki programme looks at children in that holistic sense. There are some real strengths and opportunities that Barnardos builds that are not in other parts of the sector. They're very strongly for families and they return [earnings from] their services into their business. They have advantages of large NGOs. They know who they are and what they're about ... how they can build their business in the current world ... Repealing section 59, which Barnardos strongly supported ... [there] need to be [a] whole range of other strategies for parents to use other than physical force ... We hear that it's not only poor parents that have things to learn ... Barnardos has a great raft of services that bring a high degree of value to families in the community. They are a canny, good, strong organisation."

This Ministry manager's views of integration closely resemble Barnardos management's own ideas: that it has the potential to pull disparate things together. The perspective of staff actually delivering programmes every day is considerably more nuanced. From up close it seems that although integration has advanced from a vague and abstract idea towards a series of specific initiatives, there is still some way to go to realise the potential seen by the people who are at some remove from the organisation's coalface. Fragmentation, silos, hierarchy, some marginal services and individuals all present difficulties for integration that need to be addressed if it is to proceed further. People realise these problems and seem committed to working them through. My overall impression is that the real strength of this organisation derives from three things:

- its commitment to children
- the fact that most of its staff are mothers themselves, who combine their emotional commitment to children with professional qualifications and experience
- leadership that can bring a new vision of Barnardos to fruition and work with government organisations to help facilitate it.

CONCLUSIONS

Organisations like Barnardos stand between the economic rationality of the market and the bureaucratic rationality of the state. Making up the "third sector", they provide society with a reservoir of groups that promote "philanthropy altruism, charity, reciprocity, mutuality and the ethic of caring and giving (Evans and Shields 2005:2)". When they depend on government funding, however, the role of these organisations is undermined because they can no longer lobby independently for the people they serve (op.cit.).

The sub-title of Bourdieu's incisive critique *The Essence of Neoliberalism* is that it constitutes "a programme for destroying collective structures which may impede the pure market logic". New Zealand is a country whose government embraced that logic in the 1980s more firmly than most, with widespread social and cultural implications that have hardly been investigated. Craig and Porter (2006:219) argue that by 1999 widespread opposition to the solidarity-destroying reforms resulted in a more inclusive kind of neoliberal government coming to power: "The result was a strange new hybrid ... partnership and competitive contracts, inclusion and sharp discipline, free markets and community ... (creating) impossible transaction costs and slippery multilevel accountabilities." Policy, now perceived as a means to higher ends, moved from a focus on accountability and cost-cutting to poverty alleviation, social cohesion and sustainability. Like the situation in the United States,

integrated (joined-up) services seemed to offer a chance to undo the widespread fragmentation of the preceding years. However, the new government soon realised that “closing the gaps” required more to be done than putting the pieces closer together and integrating services dropped from the policy scene (Craig and Porter 2005:240). In line with Bourdieu’s characterisation of neoliberalism as a destroyer of the conditions that could support a viable alternative to it, Craig and Porter say in a number of places in their monograph that “humpty dumpty (the disintegration created by the contract regime) could not be put together again”.

Klees (2002) asks whether contracting for external funds has turned NGOs from promoters of progressive ideas and practices into tools of neoliberal expansion. In the course of my research I found that Barnardos has been asking itself a similar question. Of course the answer is far from settled, and we don’t know for certain how integrated services will work out for this organisation or its clients. What the data presented here do show us is that there are real challenges, incentives and disincentives, doubts and hopes, sceptics and believers, within and outside of Barnardos.

This research shows that the policy of integrating services is still taken seriously in New Zealand in at least one prominent NGO and in the parts of the Ministries of Education and Social Development that work with it. This, in itself, constitutes a hopeful sign that some alternative to, or amelioration of, the most destructive aspects of neoliberalism may develop. Barnardos New Zealand is clearly trying to return to an “old order”, in this case its role of provider of comprehensive services to children who need them. While approaching this in terms of integrated services – an idea with a long history and uncertain track record – may look outmoded and conservative, it at least constitutes a possible programme of “resistance to the establishment of the new order” (Bourdieu 1998a:4). If it proves viable, what Barnardos New Zealand is attempting might show other NGOs a way of “firing back” (Bourdieu 2001) to tackle the effects of neoliberalism.

REFERENCES

- Atwool, N. (2003) “If it’s such a good idea, how come it doesn’t work?: The theory and practice of integrated service delivery” *Childrenz Issues*, 7(2):31–35.
- Barnardos New Zealand (2006) *Critical Stepping Stones 2006/2007*, Barnardos, Wellington.
- Barnardos New Zealand (2008) *Services We Offer*, www.barnardos.org.nz/SupportServices/index.asp
- Bourdieu, P. (1998a) *Acts of Resistance: Against the New Myths of Our Time*, Polity Press, Cambridge.
- Bourdieu, P. (1998b) *The Essence of Neoliberalism*, mondediplo.com/1998/12/08bourdieu.
- Bourdieu, P. (2001) *Firing Back: Against the Tyranny of the Market 2*, The New Press, New York.
- Craig, D. and D. Porter (2006) *Development Beyond Neoliberalism: Governance, Poverty Reduction and Political Economy*, Routledge, London.
- Evans, B.M. and J. Shields (2005) *The Third Sector: Neoliberal Restructuring, Governance, and the Remaking of State Civil Society Relationships*, Report No. 18, Policy Matters, CERIS – The Ontario Metropolis Centre, Toronto.
- Evans, B.M. and J. Shields (2006) *Neoliberal Restructuring and the Third Sector: Reshaping Governance, Civil Society and Local Relations*, http://www.ryerson.ca/cvss/working_papers/

- Gray, A. (2003) *Review of the Centre: Integrated Service Delivery: Regional Co-ordination: Final Workstream Report*,
<http://www.ssc.govt.nz/display/document.asp?docid=4897>
- Klees, S.J. (2002) “NGOs: Progressive force or neoliberal tool?” *Current Issues in Comparative Education*, 1(1):49–54.
- Milward, H.B. (1995) “Review of *Integrating Services for Children and Families: Understanding the Past to Shape the Future* by Sharon Lynn Kagan and Peter R. Neville” *Journal of Policy Analysis and Management*, 14(4):641–644.

**CHANGES IN STRUCTURAL DESIGN
IN THE NEW ZEALAND SOCIAL SERVICES SECTOR**

Judy Whitcombe¹
School of Government
Victoria University of Wellington

Abstract

Reform and reorganisation of the New Zealand public sector have been ongoing since the 1980s, resulting in changes to the structural design of public sector agencies. The belief that providers of services, bureaucrats and professionals were capturing the policy process influenced the separation of policy ministries from operational departments. The impact of those changes on the social sector throughout the 1990s was profound. Ministers expressed concerns about the quality of the policy advice they were receiving. The initiatives developed in the Ministry of Social Policy encountered implementation difficulties, which meant that unspent funding for social policy initiatives was carried forward from year to year. After 1999 a Labour-led government adopted an approach aimed at reunifying the social sector and addressing the problems of fragmentation and “siloes”, which were identified in the Review of the Centre by the Ministerial Advisory Group. The result has been a re-coupling of policy and operational agencies across the social services sector, with the Ministry of Social Development now the largest government department.

INTRODUCTION

The structural changes that have taken place under the public sector reform process in New Zealand are linked to changes that have taken place worldwide to modernise the public sector and improve its performance. In New Zealand the reform process involved the removal of business functions from the public sector to create state-owned enterprises, and a review of the operations of the core public sector to establish a clear focus for government agencies.

This paper focuses on the successive changes that have occurred in the structure of social service departments and the logic behind the changes that have taken place under different governments since the initial separation of policy ministries and operational departments. The changes reflect the perspectives of the various governments and key ministers within those governments. The decoupling of policy and operations in the social sector that went on during the 1990s resulted in concerns about the quality of the policy advice the Government was receiving and the problems that were becoming apparent with the implementation of policy initiatives.

BACKGROUND

The most appropriate environment for the development of robust social policy has exercised governments, ministers, academics and government agencies over the years. These issues were considered by the New Zealand Planning Council² in their 1982 report *Who Makes*

¹ **Correspondence**

Dr Judy Whitcombe, School of Government, Victoria University of Wellington, P.O. Box 600, Wellington, Telephone: 64-4-463-5233

² The Planning Council was disbanded in 1991.

Social Policy? At that time, the Planning Council had been accused of giving more weight to economic rather than to social issues. The report identified the Cabinet Committee on Family and Social Affairs as having the function of shaping social policy at the highest level. Although the Planning Council's report reviewed the other participants in the development of social policy, its comments on the overall organisation of policy development are most relevant to the situation in the 21st century.

The report noted that there was a "compartmentalised approach" to social policy and that competition between departments, and defensive attitudes, underlay the very fragmented approach to social planning in New Zealand. Greater interdepartmental cooperation in the exchange of information and in research efforts, which would recognise the inter-relationships and interdependence, was suggested. The report's conclusion addressed structural issues and noted that attempts in the past to improve coordination between departments had gone as far as amalgamating departments or parts of departments, but then asked "would any improvement be gained from creating a joint Health-Education-Social Welfare department?" (New Zealand Planning Council 1982:48). A more coordinated approach was seen as being essential for the development of social policy over the longer term. This message was subsequently echoed in the Review of the Centre (2001) report.

The need to separate policy advice from operational activity was first outlined in *Government Management* (Treasury 1987). The public management system at that time was criticised for not providing government with high-quality policy advice. Conflicting objectives arose when advice and implementation occurred within one organisation. The phenomenon of "producer capture" was also identified. Because government required advice to enable it to assess the most appropriate intervention, doubt was expressed that the agency involved in the provision of advice would be impartial if it were also involved in the delivery of services. Ministers needed contestable policy advice from a variety of sources. The decoupling of policy ministries from operational departments followed progressively.

Structural reform proceeded throughout the 1980s and 1990s. The creation of state-owned enterprises, through the State Owned Enterprises Act 1986, was followed by environmental and conservation restructuring in 1986/87, and then restructuring of the Ministry of Research, Science and Technology in 1989 with the establishment of Crown Research Institutes. Agencies established in the 1990s included the Department of Prime Minister and Cabinet and the Ministry of Māori Development, Te Puni Kōkiri. In the social³ sector, changes commenced in 1989, starting with the separation of the Department of Education and proceeding through Housing, Justice and Social Welfare in the 1990s. The last department to be established was the Department of Child, Youth and Family Services in October 1999.

CONCERNS ABOUT THE QUALITY OF POLICY ADVICE

The passing of the State Sector Act in 1988, the Public Finance Act in 1989 and the consequent managerial reforms resulted in a period when departments and governments were focused on achieving efficiency and effectiveness. However, after the first flush of freedom and excitement, Ministers began to concentrate on the quality of the advice they were receiving. In 1991 the Minister of State Services, Hon W. Birch, directed the State Services Commission to review the purchase of policy advice. He wanted to achieve a permanent improvement in the cost-effectiveness of advice (State Services Commission 1992).

³ Health has been excluded from this discussion.

In March 1997 the then Minister of State Services, Hon. Jenny Shipley, also expressed concerns about aspects of the advice being received. The Minister commented on the inability of the public service to clearly define the outcomes the Government sought to achieve and to put forward sound policy solutions for the Government's consideration; the inadequate human resource capability in some departmental policy units; and the lack of attention to implementation issues. The Minister and the State Services Commissioner agreed to initiate a project that would investigate how the quality of policy advice could be improved. The project⁴ identified five contributing factors:

1. lack of clarity in Ministers' statements about desired outcomes
2. insufficient incentives for active cooperation by departmental chief executives
3. significant variation in standards of leadership, and in the performance of policy units
4. substantial under-investment in capability development – in the past and currently
5. significantly inadequate and/or ineffective use of information, research, evaluation and consultation techniques as inputs to policy development.

The first two factors were partly addressed in the work in 1998 on strengthening strategic management, which contributed to strategic priorities and the establishment of ministerial teams. Points 3 and 4 were being addressed in the State Services Commission's current work programme (State Services Commission 1999b) Included in the five sections of the paper was one on "Encouraging significantly better consultation as an input to policy advice".

Further work to address the quality of policy advice continued. In August 1998 the Minister of State Services approved the State Services Commission's proposal to do further work to develop and promote training in policy management and policy advice. This was published in 1999 as Working Paper No. 2, *Gaining Through Training: Developing High Performing Policy Advisors*, with *Pieces of the Puzzle: Machinery of Government and the Quality of Policy Advice* (dated June 1998) published in February 2000 as Working Paper No. 4.

While the State Services Commission was focusing on addressing the quality of policy advice, within the Ministry of Social Policy initiatives were being developed to meet the Government's social policy agenda. The programmes were required to be delivered by operational departments.

IMPLEMENTATION EVALUATED AND DEFICITS IDENTIFIED

The decoupling of the service delivery operations of the Department of Social Welfare resulted in the establishment in 1992 of the Social Policy Agency, Income Support Service (later to become the Department of Work and Income), the Children, Young Persons and their Families Service, and the New Zealand Community Funding Agency (NZCFA). In January 1999 the latter two business units were combined to form the Children, Young Persons and their Families Agency, and on 1 October 1999 a new department, the Department of Child, Youth and Family Services, was established. The major social policy functions remained with the Ministry of Social Policy, which became the Ministry of Social Development when the Department of Work and Income was recombined with the Ministry of Social Policy in October 2001.

⁴ *Essential Ingredients: Improving the Quality of Policy Advice*, was published by the State Services Commission as Occasional Paper No. 9 in June 1999.

Throughout the 1990s social policy initiatives were developed, and funding was obtained through the Budget process for implementation by the operating agency. Each year when the Budget was announced, usually in the third week of May, the operating agency would receive several million dollars to implement specific projects for delivery to targeted groups. The availability of funding from 1 July (the commencement of the Government's financial year) meant a short lead time in which to have the programme operating. Because of the Budget secrecy convention operating at that time, the initiative could not be discussed with the providers who would be delivering the programme. The period between the Budget announcement in May and the 1 July date for implementation was a maximum of six weeks. This resulted in instances where, because of the extensive lead time required for gearing up for delivery and employing suitably qualified staff, the available funding was unable to be spent in the financial year for which it was appropriated. As a result, unspent appropriated funds were often carried forward to the next financial year or returned to the consolidated fund.

In order to focus on the implementation process, three initiatives that were developed by the Ministry of Social Policy and initially delivered by NZCFA are examined and discussed below:

- Family Service Centres, which were initially funded in Budget 1993, with evaluations in 1995 and 1997
- Family Start pilot programmes, which began service delivery in 1998, with the evaluation in 2003
- the Social Workers in Schools pilot, which was introduced in 1999 and the evaluation was completed in 2000.

The evaluation reports from these programmes provide some evidence of the initial delivery difficulties that occurred.

Family Service Centres

The six pilot Family Service Centres (Mangere, Otara, Huntly, Opotiki, Porirua and Motueka) were based on the model operating at Kelvin Road School in Papakura. Their function was to provide well-integrated, culturally appropriate services to families with children under six years of age in need of support. The centres were to provide family and parental support services, health services, an early childhood education centre, and HIPPY (Home-based Instruction Programme for Preschool Youngsters). The initial expectation by the Government was that the six pilot centres would be fully operational by February 1994. This meant that buildings would be constructed and the core services in place by that date, but at the end of 1994 only one building had been constructed and another was nearing completion. Full family support services were underway in only one centre at year's end.

The first-year evaluation report (Health Research and Analytical Services 1995) notes that relationships between the centres themselves and the primary funding agency, NZCFA, were often tense, because a model centrally determined did not readily accommodate local variances. NZCFA were responsible for arranging for the delivery of the programmes according to the model specified by the policy agency. There were also tensions between the centres and the Ministry of Education. In the light of the slow establishment, evaluators questioned whether the timeframe for establishing the centres was ever possible. In the second half of 1996 the broad model of four core services operating from one building was

apparent in only two of the six pilot centres, although most centres were moving closer to the intended model.

The Final Evaluation Report (Department of Social Welfare 1997) noted that the following factors had affected implementation:

- the timeframe available for implementation after the announcement of the initiative, which was unrealistic
- the extremely limited consultation with purchasers, potential providers and communities prior to the announcement of the initiative, due to Budget secrecy
- the slow development of operational policies
- tensions inherent in the implementation of a centrally determined and highly prescribed model, which was to be delivered by community-based providers and to have community support.

Family Start

Family Start is an intersectoral policy initiative jointly sponsored by the Ministers of Health, Education and Social Welfare, and which in the 1990s was part of the Government's Strengthening Families Strategy. The funding responsibility rested with the Health Funding Authority; Child, Youth and Family (CYF); and Early Childhood Development. Programmes at three sites were introduced in the 1998/99 year and an additional 13 sites were developed in the 1999/2000 year. The programme is a home visiting initiative with the aim of providing early intervention to the highest-need families to improve the longer term outcomes for their children. The support provided includes parenting advice, advocacy and referrals to appropriate social services, such as health services, budgeting advice, counselling, and early childhood education services.

The Family Start process evaluation (Evaluation Management Group 2003) noted that commentary from the sites suggested that insufficient time had been allowed to get the service up and running given the work required to develop a service from scratch. It also stated that discussion of the outcome/impact methodology highlighted the tensions involved in trying to meet the expectations and requirements of the multiple stakeholders. There was an expectation of timeliness from government officials, yet the service providers were clear about the need to take time for informed participation to occur.

Issues for consideration were highlighted for any future roll-out of the programme. These related to:

- timing – the establishment phase could take much longer than planned for, and it was likely to take two to three years before a programme was fully operational
- community consultation versus competitive tendering
- the existing/available governance infrastructures within a community
- the relationships between the proposed Family Start service and existing services in a given location.

Other issues raised in the evaluation related to the operating guidelines, the fit between the programme and the target group, and the staff skill mix and training. The staff turnover within the policy agencies meant that continuity was not always maintained, and the co-funder challenges of tight timeframes prevented planning and relationship building.

Cultural issues were also highlighted in the report. Although the guidelines had specified that the Treaty required Māori involvement in the development of Family Start, a number of stakeholders were concerned about the lack of involvement of Māori in the original policy group and the changing composition of the co-funder's group, which came to have very limited Māori representation. There had been minimal consultation with Māori communities (papakainga iwi) in the setting up of the sites and a failure to draw on important cultural expertise in the processes of establishing service boundaries.

Overall, however, the Family Start programme was considered to have been successful, and the evaluation drew attention to the community and provider relationship issues that needed to be addressed. (Family Start received additional funding of \$31.9 million over four years in the 2004 Budget to establish new Family Start sites. This funding went to Family and Community Services, which had been established within the Ministry of Social Development in 2004 as a provider and funder of services.)

Social Workers in Schools (SWIS)

This programme was announced in May 1999 and the pilot began in schools at the commencement of the third term in 1999, with the initial contracts with providers running to December 2000. The SWIS model was developed by an interdepartmental team and was based on overseas (US particularly) and New Zealand models.

The pilot was an inter-agency initiative led and financed by CYF. The delivery of social services to schools and their families/whānau was piloted in three areas: East Coast, Northland and Porirua / Hutt Valley. Clusters of schools were funded to provide services themselves or through a third party provider. The 56 participating schools were largely decile 1, although decile 2 and 3 schools were eligible.

The pilot evaluation was published in December 2000. In the schools where the pilot was working well there was enthusiasm, and the social workers and principals developed relationships of trust. The social worker was based in, or was a regular visitor to, the school and the children knew him/her by name. The model of practice the social worker practised was appropriate to the needs of the school community.

However, in the schools where the programme was not working there was a lack of clarity about the role of the social worker, the social worker did not spend sufficient time at the school to establish a working relationship with the principal and other teachers, and there were logistical problems of distance. Some schools were not fully committed to the programme from the beginning, and changes in personnel – especially with principals going on leave or transferring – undermined the continuity of service. There was suspicion at kura kaupapa Māori (Maori Language Immersion Schools) that SWIS was a mainstream service, and it was seen as an external agency.

The programme has continued to run successfully, with the recommendations of the evaluation contributing to its continuation. These included: reducing the isolation of social workers working alone, where possible; providing the programme through external and experienced social service providers; recognising the special advantages of Māori and Pacific providers; and developing the flexibility to meet local needs.

Summary of the Initiatives

The evaluations of these three initiatives indicate that implementation deficits occurred as the programmes were rolled out. These problems could be attributed to the development of the initiatives by the policy agency, which did not take into account the implementation requirements. Some difficulties occurred through a lack of understanding of the conditions in the communities where the programmes were to be rolled out. The lack of consultation with communities was a common theme.

The experiences of people involved in the social sector over this phase of the reforms provided a variety of views, but the danger of isolating policy development from the operational realities of service delivery was acknowledged. In the words of one community representative:

“Policy people don’t have contact with the community. Formerly the Department of Social Welfare had offices in local areas and knew what was going on. Departments lost staff and lost the collective memory and that was incredibly important. New people were appointed who didn’t have the background – they seem to have been brought in for another purpose.”

In the community sector, the “commercial” focus of the contractual arrangements and accountability requirements was a massive shock, for which voluntary organisations were unprepared (see Cribb 2006).

Impact of the Changes since 1999

In its pre-1999 election manifesto the New Zealand Labour Party identified problems in the public sector. These included fragmentation of the sector, both in terms of the number of agencies and the different types of agencies, all with responsibility for aspects of output delivery. Operational departments and policy ministries existed in isolation, resulting in duplication and inefficiencies. Despite the efforts of the State Services Commission throughout the 1990s, the incoming government was not happy with the quality of policy advice.

In order to address a number of weaknesses in public administration and management, the Government established the Advisory Group on the Review of the Centre in 2001 to review the public management system. In a series of reports from 2001 onwards the Advisory Group identified coordination problems and suggested solutions to combat “siloes” and achieve the goal of departments working together in a constructive way, with improved service delivery to client groups and a continuing emphasis on managing for shared outcomes.

The Prime Minister, Helen Clark, gave her views on rebuilding the public sector in a speech to the Australia and New Zealand School of Government in June 2004. She took the opportunity to review the situation when her government had come to power in 1999, summarised the changes that had taken place since then, and expressed an opinion on the way forward. She noted that the earlier reforms had improved the management focus of public sector agencies. However, the extent of fragmentation in the sector made it difficult to coordinate activities across agencies, and undoubtedly meant the sector was less effective overall:

Rebuilding the capacity of the public sector also meant addressing its excessive fragmentation. Reforms in the 1980s and 1990s had seen the old large and powerful departments split in a number of ways. In their place were established policy ministries, funding agencies, and a plethora of provider agencies, – some departmental, and others with independent boards. As a result, the skills within the departments were dispersed. Policy ministries ran the risk of losing touch with operational agencies, and the latter were not always sufficiently informed by policy. (Clark 2004)

The way forward involved rebuilding capacity and addressing excessive fragmentation. The breaking up of departments had caused the dispersal of skills, and policy ministries had been losing touch with operational agencies. The converse also applied, in that operational agencies were not always sufficiently informed by policy. The re-coupling taking place to deal with these deficiencies involved Social Welfare, Education, Justice, Transport and Housing.

Since 2001 there have been numerous structural changes in the sector. A summary of the changes that have taken place, and the reasons provided for the actions taken, is presented in Table 1. The sequence and variety of actions indicate that a case-by-case approach was taken within the overall parameter of determining the best way to achieve cohesion in a whole-of-government context. Analysis of the information contained in the table indicates that, of the 15 actions identified, five agencies (departments or Crown entities) returned or merged with their previous departments. Some of the changes were a result of the Government creating new portfolios and ministries and needing an organisational office location for them. Six of the structural changes resulted from a review – usually ordered by the Minister of State Services, Hon. Trevor Mallard. These reviews produced results ranging from mergers, through restructuring, to the status quo with the agencies remaining independent.

Table 1 Summary of Structural Changes in the Social Sector from 2001–2006

Year	Change	Reason(s) given for the change
2001	Housing Corporation merged with Housing New Zealand, and housing policy staff from the Ministry of Social Policy, to form Housing NZ Corporation.	The move was designed to bring all those agencies under one roof and provide a one stop shop for housing services and a better service for customers.
2001	The Ministry of Social Policy and the Department of Work and Income were re-coupled to form the Ministry of Social Development.	The Government had decided on the merger to provide a better organisational basis for implementing a social development approach, to deliver more effective solutions to social issues. Better coordination between policy and operations was wanted.
2002	The Special Education Service (a Crown entity) returned to the Ministry of Education.	A review ordered by the Minister of Education found the service was “ineffectual, fragmented and distanced from schools and parents”. Better coordination could be achieved under the Ministry.
2002	The Office for Disability Issues was added to the Ministry of Social Development.	The Office was established to support the Minister for Disability Issues. The portfolio was established in 2000, and policy capability was wanted following the passing of the new Disability Act (2000).
2003	Capability reviews were done of the Ministries of Women’s Affairs and Youth Affairs.	It was decided after the review that the Ministry of Women’s Affairs would remain as a stand-alone department because of its over-arching cross-governmental focus.
2003	The Ministry of Youth Affairs moved to the Ministry of Social Development.	The review found that Youth Affairs sits closely with the social development interests of the Ministry of Social Development. This was part of a move to house small ministries under a bigger department.

Year	Change	Reason(s) given for the change
2003	The Office for the Community and Voluntary Sector was added to the Ministry of Social Development.	The Office was established to support the Minister for the Community and Voluntary Sector. The new portfolio was established in 2000,
2003	Early Childhood Development (a Crown entity) returned to the Ministry of Education.	The integration followed a review of Early Childhood Education and the aim was to help progress the goals of the 10-year strategic plan by combining the strengths of each organisation to build greater support for the sector.
2003	The Department for Courts merged with the Ministry of Justice.	The Minister of State Services directed the State Services Commission to review the "fit for purpose" of the 1995/96 Justice restructuring and to achieve better sector and policy/operations coordination.
2004	The transport sector was reorganised following a comprehensive review in 2003.	The recommendations from the review were implemented with the aim of better aligning the sector and the legislation with the New Zealand Transport Strategy. Structural changes included transferring the policy functions of the Land Transport Safety Authority and Transfund to the Ministry of Transport to support its role of leading the sector.
2004	The Ministry of Housing was expanded and renamed the Department of Building and Housing.	The change was aimed at improving and streamlining building and housing services for the public to provide a one stop shop..
2004	The Family and Community Services Group (FACS) was established in the Ministry of Social Development.	The aim was to lead and coordinate government and non-government actions to support families and communities, and to contract out operational funding transferred from the Department of Child, Youth and Family Services.
2004	The Department of Labour was restructured.	This was done to realign key functions and improve responsiveness and organisational adaptability to the labour market. Service delivery and policy advice capabilities were brought together.
2005	A review of the education sector looked at the effectiveness of the machinery of government and governance arrangements for education sector agencies (Ministry of Education, New Zealand Qualifications Authority and Tertiary Education Commission).	The review found that the three agencies should work together more closely, their policies and activities should be better aligned, and the Ministry of Education should exercise leadership. The review concluded that, at this time, there should be no major structural change.
2006	The Department of Child, Youth and Family Services merged with the Ministry of Social Development.	In light of the departure of the chief executive, and after reviewing four options, the State Services Commission recommended the merger option to achieve better alignment in the social services sector.

THE CURRENT SITUATION

Since 2000, departments and ministries in the social sector have been receiving attention, as outlined in the table above. They are required to focus on key functions and reduce fragmentation through better alignment of policy and service delivery. With the merger of the Department of Child, Youth and Family Services with the Ministry of Social Development in 2006, the Department of Social Welfare business units, which had been initially separated out in 1992, were now back together again.

There had been further moves to focus on the coordination of services, with the establishment of the Family and Community Services Group (FACS) in the Ministry of Social Development in July 2004. Its role was to lead and coordinate government and non-government actions to support families and communities. Funding for community-based programmes was transferred from Child, Youth and Family Services to FACS in the 2004 Budget. FACS has two roles within the sector: first, as a provider and funder of services, including information and advice for families and communities; and second, as a leader and coordinator of services for families at a general, as well as a case work, level. Further funding for family and community programmes was transferred from CYF in 2005 and 2006.

The Ministry of Social Development is now the largest government department, with almost 10,000 staff. The Ministry leads the Families – Young and Old budget process and coordinates cross-sectoral collaboration in the social sector. The chief executive chairs the Social Sector Chief Executives Group. The Ministry's organisational structure comprises three clusters – policy, service delivery, and corporate governance and risk. The regional commissioners have a leadership mandate across those structures, and put people together in teams based on common outcomes. Although policy and service delivery are separate groups within the national office, they work together through cross-cutting soft processes, which allow people from policy and service delivery to work together in teams. There is now integrated case management, and there are shared programmes with other agencies. The importance of bringing the policy and service delivery functions closer together was identified, and now policy and delivery work is undertaken in teams to focus on outcomes, with projects led by different groups, depending on the project.

CONCLUSION

Although the splitting of policy and service delivery functions in the public sector reduced the capture of policy by delivery agencies, the negative impact of separation proved that policy development had not taken sufficient account of the circumstances in which services are delivered. The result was deficits in implementation. The way forward – to emphasise a whole-of-government approach to achieve shared outcomes – should produce greater structural consistency across the sector, better-grounded policy and more realistic implementation development.

REFERENCES

- Clark, H. (2004) "Rebuilding public sector capability" (the Paterson Oration), paper presented at the Australia / New Zealand School of Government, Wellington.
- Cribb, J. (2006) *Being Accountable: Voluntary Organisations, Government Agencies and Contracted Social Services in New Zealand*, Institute of Policy Studies, Wellington.
- Department of Social Welfare (1997) *Final Report: Family Service Centres Evaluation*, Department of Social Welfare, Wellington.
- Evaluation Management Group for the Ministry of Education, Ministry of Health and the Ministry of Social Development (2003) *Family Start Process Evaluation Final Report: A Summary and Integration of Components of the Process Evaluation Phase*, Ministry of Social Development, Wellington.
- Health Research and Analytical Services, New Zealand Council for Educational Research (1995) *Family Service Centre Evaluation: Report on 1994 – The First Year*.

- Ministry of Social Policy (2000) *Evaluation of the Social Workers in Schools Pilot Programme Final Report*, Ministry of Social Policy, Wellington
- New Zealand Planning Council (1982) *Who Makes Social Policy?* New Zealand Planning Council, Wellington.
- Review of the Centre (2001) *Report of the Advisory Group on the Review of the Centre: Presented to the Ministers of State Services and Finance*, State Services Commission, Wellington.
- State Services Commission (1992) *The Policy Advice Initiative: Opportunities for Management*, State Services Commission, Wellington.
- State Services Commission (1999a) *Essential Ingredients: Improving the Quality of Policy Advice*, Occasional Paper No. 9, State Services Commission, Wellington.
- State Services Commission (1999b) *Gaining Through Training: Developing High Performing Policy Advisors*, Working Paper No. 2, State Services Commission, Wellington.
- State Services Commission (2000) *Pieces of the Puzzle: Machinery of Government and the Quality of Policy Advice*, Working Paper No. 4, State Services Commission, Wellington.
- State Services Commission (2002) *The Review of the Centre: One Year On: Getting Better Results – For Citizens, Ministers and Staff*, State Services Commission, Wellington.
- Treasury (1987) *Government Management*, Government Printer, Wellington.

**HOUSEHOLD ECONOMIC RESOURCES AS A DETERMINANT OF CHILDHOOD
NUTRITION: POLICY RESPONSES FOR NEW ZEALAND**

Mat Walton¹
Louise Signal
George Thomson
Health Promotion and Policy Research Unit
Department of Public Health
University of Otago, Wellington

Abstract

Improving the nutrition of children and reducing rates of childhood overweight and obesity have been high priorities for the New Zealand Government since 2000. The rates of childhood overweight and obesity vary by ethnic group and socio-economic status, and reducing inequalities in the burden of childhood overweight and obesity is an explicit aim of the Government. This paper aims to identify policy options that will have an impact on the economic drivers of childhood nutrition and obesity. A qualitative model of the economic determinants of childhood nutrition within a household setting is presented. The model identifies cost barriers to sufficient healthy food as a key factor in the foods purchased and consumed within a household. An analysis of New Zealand household economic and nutritional data then identifies policy options to improve childhood nutrition and reduce rates of overweight and obesity. These policy options focus on cost subsidies for non-discretionary household expenditure and reducing the price of food to increase access to nutritious foods, including fruit and vegetables.

INTRODUCTION

Nutrition, physical exercise and obesity have been identified as important policy areas for the New Zealand Government since 2000 (Ministry of Health 2000), with children receiving particular attention (Ministry of Health 2003c; Ministry of Social Development 2004)². Children who are overweight and obese are at risk of hypertension, cardiovascular disease and depression in adolescence (Pyle 2006), while in adulthood obesity is considered the main modifiable risk factor for type 2 diabetes mellitus, and a significant risk factor for cardiovascular disease and several common cancers (James et al. 1997; Ministry of Health 2006). These non-communicable diseases will impose significant costs on the public health system in future years (Ministry of Social Development 2004).

New Zealand is not alone in highlighting obesity, nutrition and physical exercise in public policy. Several European Union member states have implemented policies to reduce the

¹ Acknowledgements

The authors would like to thank Carolyn Watts and Gabrielle Jenkin for comments on earlier drafts of this paper. Funding for this research came from the Health Sponsorship Council MPH Scholarship for Mat Walton, and the University of Otago Faculty of Medicine Trust Fund.

Correspondence

Mat Walton, Department of Public Health, University of Otago, PO Box 7343, Wellington.

Email: mathew.walton@otago.ac.nz

² This paper was written in 2007 and accepted for publication in 2008. More recent child overweight and obesity prevalence figures and Household Economic Survey data is available, while some changes have been made to Government funded nutrition programmes.

future obesity burden (Caraher et al. 2006; Lang and Rayner 2005), and a similar need for government action has been identified in the United States (Cawley 2006) and Australia (Zimmet and James 2006).

According to the 2002 Children's Nutrition Survey, 9.8% of the 5–14-year-old population in New Zealand were obese, with another 21.3% overweight (Ministry of Health 2003b). The rates were not uniform across ethnic groups, with Pacific children experiencing the highest rates of overweight and obesity (females 32.9% overweight, 31% obese; males 33.9% overweight, 26.1% obese), followed by children of Māori ethnicity (females 30.6% overweight, 16.7% obese; males 19.6% overweight, 15.7% obese). Reducing the inequalities experienced in the burden of childhood obesity is an explicit aim of government policy (Ministry of Health 2000, 2003c).

This paper examines the role of household economic resources and deprivation as a determinant of childhood nutrition and childhood overweight and obesity. We then look at broad policy options to improve nutrition and reduce differences in overweight and obesity rates between ethnic and socio-economic groups.

METHODS

The Causes of Overweight and Obesity

Policy interventions that include the aim of reducing inequalities must be based on a theory of the causes of the problem to be addressed and how interventions will have an impact on the problem (Swinburn et al. 2005; Whitehead 2007). Obesity in children can be viewed as the result of nutrition practices which combine biological and environmental factors, starting *in utero* and carrying on through the life course (Godfrey et al. 2007), which lead to an imbalance between energy consumed and energy expended (World Health Organisation 2003). Nutrition during critical periods of development may have life-long impacts on the health of an individual (Ben-Shlomo and Kuh 2002; Rush et al. 2008). Exposure to energy-dense foods during the life course can then add to the disease risk (Ben-Shlomo and Kuh 2002; Godfrey et al. 2007).

Historically, many approaches to stabilising obesity rates have focused on individual behaviour change – with limited success (Swinburn et al. 1999). In a review of policy approaches to obesity, Lang and Rayner (2005) note that policy responses should not rely on food and activity choices made by children, as “their choices are for the most part determined by features of the adult-framed environment, such as transport, culture, education, and eating habits” (Lang and Rayner 2005: 307-308). This view is supported by Drewnowski and Rolls (2005) and Caraher and Coveney (2004), who argue that factors such as class, gender, ethnicity, income and market forces governing access and food supply act to constrain individual choices. This has been shown in the Pacific Island Families Study, where almost 40% of mothers stated that when finances are constrained, food choices are also constrained (Rush et al. 2007). Within this resource-constrained environment, social practices such as gift giving to family or church remain strong and can make the financial situation in a household more difficult (Cowley et al. 2004).

Swinburn et al. (1999) suggest that people find healthy lifestyles difficult in environments that promote high energy intake and sedentary behaviours, and that “systems-based, environmental interventions are therefore needed to increase the rather modest impact of

individual and public education programs” (Swinburn et al. 1999: 563). Such an intervention would consider nutrition practices within a household in the context of cultural practices, physical and economic resources, and the ability to implement changes within these environments.

A qualitative model of the social system that generates childhood overweight and obesity within households was developed for this analysis based on a narrative review of the literature. The model development was informed by complexity theory (Blackman 2006; Byrne 1998, 2005), and methods from systems theories (Checkland and Scholes 1990; Midgley 2000). Complexity theory focuses on the study of complex systems, where a “system can be any collection of objects or processes deemed to be of interest” (Gare 2000: 330). Complex systems have particular properties, including responsiveness to local context; being composed of numerous elements, including other complex systems; and behaving in a non-linear manner (Shiell et al. 2008). For this work we have focused on the complex systems around household resources (see Figure 1). A social phenomenon, such as increasing rates of childhood overweight and obesity, is seen as “emerging” from the relevant social system as a whole. Thus, to understand childhood overweight and obesity, the social system as a whole must be understood (Byrne 2005).

Literature Review Process

A narrative literature review (Mays et al. 2005) identified factors within the household setting that lead to childhood nutritional practice in New Zealand, with an explicit focus on differences in ethnic and socio-economic status. Literature searches were conducted using Medline, Academic Search Premier, Index New Zealand and PubMed, between January and March 2007. Combinations of search terms were used to highlight literature related to children’s nutrition and the prevention of obesity, and were limited to the English language. To increase the relevance to New Zealand of factors identified in the literature, an inclusion preference was given to review articles and research conducted in New Zealand. In areas where comprehensive reviews were not found (such as the location of food shopping outlets), original research articles were included. In all, 33 journal papers were included in the development of a model of factors influencing nutrition within the household setting.

Mapping the System

The identified factors operating within the household setting were grouped under thematic headings (Dixon-Woods et al. 2005), and mapped as shown in Figure 1. The household setting was chosen as a focus because it is the most influential setting on childhood nutrition for primary school-aged children (Patrick and Nicklas 2005), potentially providing all meals in a day, but also showing a gradient in practice among ethnic and socio-economic groups (Utter et al. 2007; Utter et al. 2006b). The interaction between the factors in Figure 1 was inductively identified through the results presented in the literature, and therefore represents a theory of how the interacting factors lead to the childhood nutrition outcomes in New Zealand. The factors identified were:

- caregiver perceptions of food and nutrition, and parenting style
- food eaten within the household
- the agency of children (which changes with age)
- non-economic resources, such as time available for cooking and shopping
- the cost of food
- the food purchasing practices of caregivers

- the food available in the community
- the economic resources available in the household.

No direction of interaction between factors is shown in the figure, because it is assumed that within a complex social system factors are mutually influencing in a non-linear fashion. Children's nutrition "emerges" out of this system as a whole.

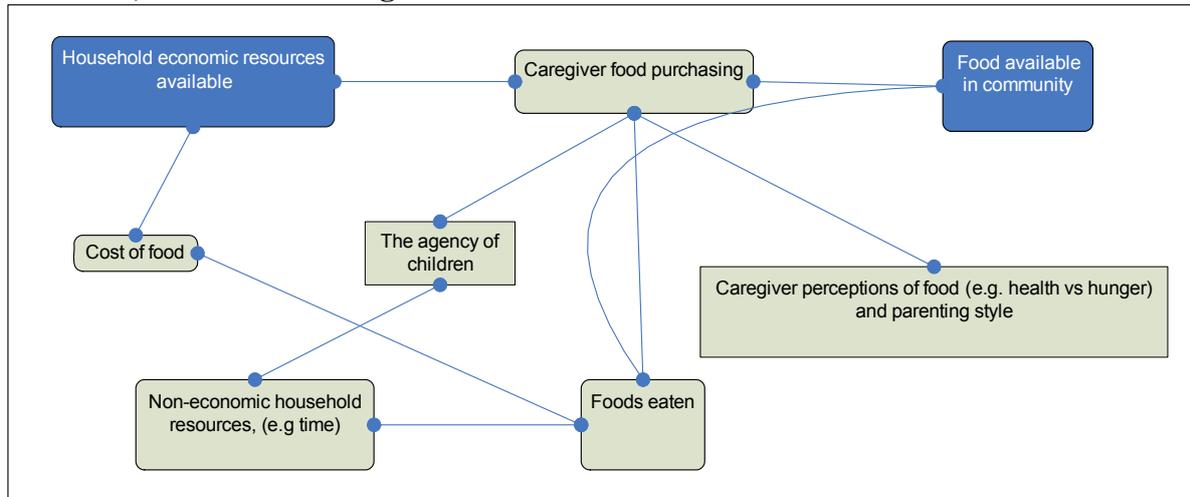
Figure 1 highlights "household economic resources available" and "food available in community" because they were identified as having a controlling influence on other factors and the system as a whole (Blackman 2006; Byrne 2001). That is, these factors limit the range of food purchased and consumed more than personal influences such as preference for food types. These controlling factors are themselves influenced by systems outside of the household setting. From a policy perspective, controlling factors should be the focus of analysis and action in terms of having a positive impact on childhood nutrition outcomes (Blackman 2006). The following analysis focuses on household economic resources only.

Recent New Zealand research suggests that physical access to food outlets may be slightly better in more deprived neighbourhoods (Pearce et al. 2008a), and that there is not a simple relationship between location of food outlets and nutrition practices, as measured by fruit and vegetable intake (Pearce et al. 2008b). This suggests that factors such as the type and quality of goods for sale in food outlets, transport options and cost of food all need to be considered when looking at the availability of food in a community. The aim of the analysis below is to identify policy options that will influence these household economic resource factors, so that the ability to choose healthy food can be increased for households, with a possible flow-on effect of improving childhood nutrition and reducing rates of childhood overweight and obesity.

ANALYSIS OF HOUSEHOLD ECONOMIC RESOURCES AS A DETERMINANT OF CHILDHOOD NUTRITION

Household economic resources in relation to food can be defined as money available to spend on food after all other non-discretionary costs have been removed. The theory represented in Figure 1, based on the literature review, suggests that as the money available to spend on food decreases, there is a corresponding decrease in the degree of choice parents have in the foods they purchase. At the same time, an availability of low-cost energy-dense food provides an affordable option for parents with limited resources, which in turn may have an impact on how much of household money is prioritised for food purchases. When household economic resources are severely limited, there is more pressure to provide food to ensure family members are not hungry, and this may take precedence over the nutrient value of meals (Drewnowski and Specter 2004; Jain et al. 2001).

Figure 1 Household Setting Complex System Model Showing Influences on Children's Nutrition, Identified Through the Literature Review



Unlike rent or mortgage payments, the amount of money a household spends on food is to some degree discretionary (Turrell 1996; Turrell and Kavanagh 2006). Drewnowski and Darmon (2005) suggest that low-income families, in the face of diminishing income, will attempt to maintain food costs as a fixed percentage of income, which will drive families in the direction of energy-dense foods and a higher proportion of food containing grains, added sugars and added fats. When faced with marginal increases in income, this pattern is unlikely to change for low-income families (Drewnowski 2004). This assertion is supported by studies that have reported cost as a key factor in purchasing vegetables, fruit and perceived healthier goods among lower socio-economic households (Campbell et al. 2002; Drewnowski 2004; Inglis et al. 2005; Signal et al. 2008). Findings from the Pacific Islands Family Study also support this assertion to some degree, by showing an inverse relationship between the energy density of foods and energy cost (Rush et al. 2007). However, families faced with financial constraints often chose to buy more nutritious foods, such as bread, milk and meat, rather than convenience foods (Rush et al. 2007).

A key piece of research in New Zealand that provides some insight into household resources is the New Zealand Living Standards work produced by the Ministry of Social Development (Jensen et al. 2006). It uses a survey tool to measure households' access to amenities, social and recreational activities, preferred foods, and so on. The responses are scored against an index known as the Economic Living Standard Index. Scores are divided into seven categories, ranging from "severe hardship" through to a "very good" living standard. Severe hardship includes:

- a restriction due to cost of items termed as basic, such as fruit and vegetable purchases and household heating
- accommodation problems
- financial problems, including difficulty paying rent, mortgage or utilities
- a few items defined as luxuries.

As living standards improve, the percentage of basics and luxuries increases while the number of accommodation and financial problems decreases.

Although no direct correlation can be drawn between the 2004 Living Standards Survey results (Jensen et al. 2006) and the 2002 Children's Nutrition Survey results (Ministry of Health 2003b), there are similarities in the proportion of households with children living in

hardship and the proportion of children overweight and obese. As shown in Table 1, the percentage of children within ethnic groups who are overweight or obese shows a similar trend to households with children in some degree of hardship, for each of the Māori, Pacific, and New Zealand European and Other groupings. This suggests some likely cross-over in these groups. Links between socio-economic status, whether defined by income or parental education, and childhood obesity have been shown in the literature (Bhattacharya et al. 2004; Danielzik et al. 2005; Ministry of Health 2003b). Consistent with this literature, the similarity in the proportion of households in hardship and the proportion of children overweight and obese shown in Table 1 suggests that household economic resources may be an important factor in determining nutrition practices in households in New Zealand.

Table 1 Percentage of Children Overweight and Obese and Percentage of Households with Dependent Children in Hardship

Ethnicity and gender	Total percentage overweight and obese ¹	Total percentage of economic family units with dependent children in hardship ²
Māori males	35.3	
Māori females	47.3	
Māori households		44
Pacific males	60	
Pacific females	63.9	
Pacific households		61
NZEO ³ males	23.1	
NZEO females	24.8	
European households		30

1 2002 Children's Nutrition Survey (Ministry of Health 2003b)

2 New Zealand Living Standards 2004 (Jensen et al. 2006: 108)

3 NZEO refers to New Zealand European ethnic category plus 'Other' ethnic category

Severe hardship is also more likely to be experienced in households with a single parent, or with three or more children, and particularly where an income-tested benefit is the main income source (Jensen et al. 2006). Households in hardship will often forego purchasing items or engaging in activities, as shown in Table 2. For children this includes postponing visits to the doctor, buying school supplies, and engaging in sporting and cultural activities (Jensen et al. 2006).

Twenty-two percent of households reported in the 2002 Children's Nutrition Survey that they could not always afford to eat properly (Ministry of Health 2003b). Of these households, 22% said they sometimes ran out of food, 18% stated they sometimes needed to eat less, 35% said they restricted the variety of food purchased, while 21% sometimes needed to rely on others, food banks or special grants for food. Analysis of the survey results by Parnell et al. (2005) indicates that children from food-insecure households had lower levels of nutrient intake of lactose and calcium (from dairy products), and of β -carotene and vitamin A (from fruit and vegetables). Rush et al (2008) have shown that a higher proportion of fruit and vegetables in the diet of families is associated with higher birth weights but lower BMI and weight gain over the first four years of life, both of which have established links to health outcomes in later life. This highlights the importance of a healthy, nutritious diet and the impacts that food insecurity in households with children could have on later health outcomes.

Table 2 Percentage of Households with Dependent Children in Hardship Reporting Restrictions Due to Cost of Items

	Households in severe hardship (%)	Households in significant hardship (%)	Households in some hardship (%)
Item not obtained / participated in because of cost			
Personal computer	55	27	23
Internet access	51	30	23
Have child's friend over for a meal	38	9	6
Consumption cut back because of cost			
Not gone on school outings	66	32	26
Not bought school books/supplies	49	30	19
Postponed child's visit to doctor	46	19	20
Child's involvement in sports limited	66	42	40
Child went without cultural lessons	55	50	40
Limited space for child to study or play	72	48	34

Source: (Jensen et al. 2006: 113)

The University of Otago Department of Nutrition undertakes an annual survey of supermarkets to track the cost of food (measured as a food basket) in New Zealand (Department of Human Nutrition 2006). The basic basket consists of the most commonly consumed fruit and vegetables, and the lowest priced items from different food categories that are needed to meet the nutrition needs of most people, according to the New Zealand Food and Nutrition Guidelines (Ministry of Health 1997, 1998, 2003a). Spending less than the cost of the basic food basket on food places households at risk of inadequate nutrition. Table 3 shows a comparison of weekly food expenditure, by household composition, as described by the 2004 Household Economic Survey (Statistics New Zealand 2004) with the national average cost of a basic food basket in 2004.

Table 3 Average Weekly Food Expenditure, by Household Composition, 2004

Household Composition	Weekly food expenditure ¹	Basic cost basket for household ²	Difference between weekly expenditure and basic food basket	Basic basket cost as percentage of weekly food expenditure
Couple only	\$139.10	\$96.80	\$42.30	70%
Couple with 1 child	\$160.90	\$138.60	\$22.30	86%
Couple with 2 children	\$195.20	\$167.00	\$28.20	86%
Couple with 3+ children	\$213.50	\$193.40	\$20.10	91%
Single parent (1+ children)	\$93.10	\$89.20	\$3.90	96%

1 2004 Household Economic Survey (Statistics New Zealand 2004)

2 University of Otago Food Cost Survey 2004 (Department of Human Nutrition 2006), for cost calculation, national average of costs, with assumptions that first child was 10 years old, second child 5 years old, third child 4 years old, and single parent is a women with one child.

While all household types have an average weekly expenditure on food sufficient to purchase the basic food basket, both the average single parent and an average couple with three or more children would *not* be able to afford the basic basket if the cost of an adolescent male were used rather than that of a 10-year-old child. As it stands, the difference between average expenditure and the cost of a basic food basket is minimal, especially for single-parent

households. This means that for those in these groups with incomes appreciably below the average, or with non-food expenditure appreciably above the average (such as those with high housing costs), the inability to meet nutrition needs could be a common occurrence.

It can be assumed that periods of not being able to afford food or other items, as described above, arise due to pressures to spend in other areas such as rent or utility bills (Turrell 1996). Although further research is required that describes the trade-offs and lifestyle experienced by households in these hardship categories, it seems reasonable to assume some connection between the higher proportions of Māori and Pacific children reporting inactivity and TV watching (Utter et al. 2006a; Utter et al. 2006b) with households in hardship having to restrict children's involvement in sporting and cultural lessons, and with limited space to play. Added to this is the likelihood that energy-dense and nutrient-poor food is cheaper than low-energy and nutrient-dense foods (Andrieu et al. 2006; Drewnowski 2004; Drewnowski and Darmon 2005; Rush et al. 2007) and it can then be seen how household economic resources could heavily influence nutrition practice and, ultimately, rates of obesity.

POLICY OPTIONS FOR INCREASING HOUSEHOLD ECONOMIC RESOURCES TO SPEND ON FOOD

With reference to Figure 1, it seems likely that in order to increase household economic resources to spend on food, either caregiver purchasing practices could be changed, the cost of food reduced, or total household economic resources increased through additional income or reduced expenses.

From late 2004 until 2007 the Government in New Zealand has implemented a series of changes to the financial assistance available to low- to middle-income families with children. This is known as the Working for Families package. The aim of the package is to ensure income adequacy, and to support people into work through a series of tax rebates and in-work payments (Jensen et al. 2006). The evaluation of the Working for Families package shows a high level of uptake among eligible families (Ministry of Social Development and Inland Revenue 2006). It is difficult to say, however, what impact this has had on reducing the number of households in the hardship living standard categories, because income is not the only factor that contributes to deprivation (Jensen et al. 2007).

There are a couple of obvious limitations to the policy in terms of the way it can support improved nutrition practices. Firstly, the Working for Families in work payment is only available to parents who are receiving salary and wages, and does not apply to beneficiaries. The Living Standards research reports that 32% of sole-parent beneficiaries and 31% of two-parent beneficiary households are in severe hardship (Jensen et al. 2006). It can be assumed, therefore, that the Working for Families package will have a limited role in promoting the purchase and consumption of nutrient-dense foods among households with income support benefits as their primary source of income. The second limitation is that for households in hardship categories, there are many restrictions experienced due to cost, such as visits to the doctor, as shown in Table 2 above, or cultural practices, such as gift giving in Pacific communities (Cowley et al. 2004). Any increase in income will need to be split between these discretionary items, depending on the pressures at that point in time.

To improve this situation it is likely that several approaches are required. Firstly, if competing demands for discretionary spending on what are in effect non-discretionary items – such as visits to doctors, school supplies, household heating and housing costs – are

reduced, the opportunity for any additional income being used on food with improved nutritional quality is increased. Already subsidies for children's doctor visits have been increased (Ministry of Health 2001). However, additional subsidy or full funding arrangements may be required for the costs to families of school books, fees and extra activities, and for involvement in sporting and cultural activities. Reducing required household expenditure on items such as utility bills and housing costs may have additional health benefits to the household, as well as the potential for increased food expenditure (Frank et al. 2006; Howden-Chapman 2004).

Secondly, the cost of food items that are likely to improve nutritional practice could be reduced. Using the tax system to change the cost of food is one possible policy option (Wall et al. 2006). Although a review of taxes on foods by Caraher and Cowburn (2005) did not identify any jurisdiction where taxes on food are used as interventions for improving population-level nutrition, there are examples of differential taxes being applied to foods that may reduce the cost of healthy nutritious foods relative to other food products. For example, Value Added Tax (VAT) in the UK is applied to some "treat foods" but not to the majority of foods, while in Australia Goods and Services Tax is excluded from most foods (Caraher and Cowburn 2005). There is currently a 12.5% Goods and Services Tax on all food in New Zealand, which could be reduced or removed for some foods, such as fruit and vegetables, lower fat milk and more nutrient-dense bread. If a trend of higher food prices continues (there was a rise of 9.9% in food cost for the year to October 2008 (Statistics New Zealand 2008), the relevance of policy options that have an impact on the price of food is likely to increase.

Many of the current childhood nutrition policies focus on schools as a site of intervention (Clark 2006; New Zealand Government 2006). From a school perspective, if household economic resources restrict the availability of nutritious foods for children, then improving the availability of these foods within the school environment is likely to help offset the impact of the home environment to some degree. This would suggest that programmes such as Fruit in Schools should be extended, and possibly other programmes introduced, such as school breakfasts or lunches. This is consistent with evidence in countries that have school food services (such as the United States and United Kingdom), and the improvements in nutrient intake for children when quality meals are provided in the school environment (Anderson et al. 2005; Fleischhacker 2007; Rampersaud et al. 2005).

DISCUSSION

The policy options identified above result from a complexity theory-driven review of nutrition-related literature. The analysis suggests that for households in some degree of deprivation, and with limited economic resources, policies to increase the money available to purchase healthy food and to reduce cost barriers to healthy foods are required. Interventions aimed at promoting healthy purchases by parents and children can be implemented at the same time. However, until healthy choices are more accessible for all households, such interventions are likely to have limited impact at best, and increase inequalities in nutrition outcomes at worst. This is because household resources limit the ability of members of the household, including parents, to consistently access healthy, nutritious foods.

The impact of household resources on the foods purchased and consumed highlights the importance of considering the flow-on impacts of policies (such as income support policies) on multiple adjacent policy areas, including nutrition and public health. The results of this analysis reinforce the use of planning tools such as health impact assessments, which assist

policy makers and others to assess the impact of policies outside the health sector on health wellbeing and equity (Signal et al. 2006).

The analysis presented in this paper has several implications for existing nutrition and income support policies. Many of the policy interventions currently being implemented under the Mission-On set of initiatives are various social marketing campaigns (New Zealand Government 2006). The above analysis suggests that these campaigns need to be supported by interventions that focus on income security and supply of healthy nutritious foods. The Healthy Eating – Healthy Action (HEHA) Strategic Framework (Ministry of Health 2003c, 2004) recognises that such interventions are required, but these have not yet flowed through into intervention plans.

Evaluation of the Working for Families package should include an assessment of the impacts on health. This analysis shows important nutritional implications for households with income support benefits as their primary income source, and how the cost of food and other health necessities is related to income adequacy.

The merits of a complex system-focused policy analysis and intervention design are shown through this analysis. The analysis, however, is based on the available literature, and therefore may be missing important elements of difference between households, such as those based on ethnic group, geographical distribution or history of deprivation. The analysis does, however, provide a model of the factors interacting within a household that have an impact on childhood nutrition, which can be refined further through primary research.

REFERENCES

- Anderson, A.S., Porteous, L.E.G., Foster, E., Higgins, C., Stead, M., Hetherington, M., Ha, M.A., & Adamson, A.J. 2005. The impact of a school-based nutrition education intervention on dietary intake and cognitive and attitudinal variables relating to fruits and vegetables. *Public Health Nutrition* 8: 650-656.
- Andrieu, E., Darmon, N., & Drewnowski, A. 2006. Low-cost diets: more energy, fewer nutrients. *European Journal of Clinical Nutrition* 60: 434-436.
- Ben-Shlomo, Y., & Kuh, D. 2002. A life course approach to chronic disease epidemiology: conceptual models, empirical challenges and interdisciplinary perspectives. *International Journal of Epidemiology* 31: 285.
- Bhattacharya, J., Currie, J., & Haider, S. 2004. Poverty, food insecurity, and nutritional outcomes in children and adults. *Journal of Health Economics* 23: 839-862.
- Blackman, T. 2006. *Placing Health. Neighbourhood renewal, health improvement and complexity*, Policy Press, Bristol.
- Byrne, D. 1998. *Complexity Theory and the Social Sciences: An introduction*, Routledge, New York.
- Byrne, D. 2001. What Is Complexity Science? Thinking as a Realist About Measurement and Cities and Arguing for Natural History. *Emergence* 3: 61-76.
- Byrne, D. 2005. Complexity, Configurations and Cases. *Theory Culture Society* 22: 95-111.
- Campbell, K., Crawford, D., Jackson, M., Cashel, K., Worsley, A., Gibbons, K., & Birch, L.L. 2002. Family food environments of 5-6 year old children: Does socioeconomic status make a difference? *Asia Pacific Journal of Clinical Nutrition* 11(Suppl): s553-s561.
- Caraher, M., & Coveney, J. 2004. Public health nutrition and food policy. *Public Health Nutrition* 7: 591-598.

- Caraher, M., & Cowburn, G. 2005. Taxing food: implications for public health nutrition. *Public Health Nutrition* 8: 1242-1249.
- Caraher, M., Landon, J., & Dalmeny, K. 2006. Television advertising and children: lessons from policy development. *Public Health Nutrition* 9: 596-605.
- Cawley, J. 2006. Markets and Childhood Obesity Policy. *The Future of Children* 16: 69-88.
- Checkland, P., & Scholes, J. 1990. *Soft Systems Methodology in Action*, John Wiley and Sons, Chichester.
- Clark, H. (2006). Speech notes for address at launch of the Mission-On package, Aotea Centre, Auckland: New Zealand Government.
- Cowley, E.T., Paterson, J., & Williams, M. 2004. Traditional Gift Giving Among Pacific Families in New Zealand. *Journal of Family and Economic Issues* 25: 431-444.
- Danielzik, S., Pust, S., Landsberg, B., & Muller, M.J. 2005. First lessons from the Kiel Obesity Prevention Study (KOPS). *International Journal of Obesity* 29 Suppl 2: S78-83.
- Department of Human Nutrition 2006. Information package for users of the estimated food costs, University of Otago, Dunedin.
- Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. 2005. Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research and Policy* 10: 45-53.
- Drewnowski, A. 2004. Obesity and the food environment: dietary energy density and diet costs. *American Journal of Preventive Medicine* 27: 154-162.
- Drewnowski, A., & Specter, S. 2004. Poverty and Obesity: the role of energy density and energy costs. *American Journal of Clinical Nutrition* 79: 6-16.
- Drewnowski, A., & Darmon, N. 2005. Food choices and diet costs: an economic analysis. *Journal of Nutrition* 135: 900-904.
- Drewnowski, A., & Rolls, B.J. 2005. How to modify the food environment. *Journal of Nutrition* 135: 898-899.
- Fleischhacker, S. 2007. Food Fight: The Battle Over Redefining Competitive Foods. *The Journal of School Health* 77: 147.
- Frank, D.A., Neault, N.B., Skalicky, A., Cook, J.T., Wilson, J.D., Lvenson, S., Meyers, A.F., Heeren, T., Cutts, D.B., Casey, P.H., Black, M.M., & Berkowitz, C. 2006. Heat or Eat: The Low Income Home Energy Assistance Program and Nutritional and Health Risks Among Children Less than 3 Years of Age. *Pediatrics* 118: e1293-e1302.
- Gare, A. 2000. Systems Theory and Complexity Introduction. *Democracy and Nature* 6: 327-339.
- Godfrey, K.M., Lillycrop, K.A., Burdge, G.C., Gluckman, P.D., & Hanson, M.A. 2007. Epigenetic Mechanisms and the Mismatch Concept of the Developmental Origins of Health and Disease. [Miscellaneous Article], *Pediatric Research* May 2007;61(5, Part 2) Supplement:5R-10R
- Howden-Chapman, P. 2004. Housing Standards: a glossary of housing and health. *Journal of Epidemiology & Community Health* 58: 162-168.
- Inglis, V., Ball, K., & Crawford, D. 2005. Why do women of low socioeconomic status have poorer dietary behaviours than women of higher socioeconomic status? A qualitative exploration. *Appetite* 45: 334-343.
- Jain, A., Chamberlin, L.A., Carter, Y., Powers, S.W., & Whitaker, R.C. 2001. Why Don't Low-Income Mothers Worry About Their Preschoolers Being Overweight? *Pediatrics* 107: 1138.
- James, W.P.T., Nelson, M., Ralph, A., & Leather, S. 1997. The contribution of nutrition to inequalities in health. *BMJ* 314: 1545-1549.

- Jensen, J., Krishnan, V., Hodgson, R., Sathiyandra, S.G., Templeton, R., Jones, D., Goldstein-Hawes, R., & Beynon, P. 2006. New Zealand Living Standards 2004 Nga Ahuatanga Noho o Aotearoa, Ministry of Social Development, Wellington.
- Jensen, J., Sathiyandra, S., & Matangi-Want, M. 2007. The 2004 New Zealand Living Standards Survey: What does it signal about the importance of multiple disadvantage. *Social Policy Journal of New Zealand* 30: 110-144.
- Lang, T., & Rayner, G. 2005. Obesity: a growing issue for European policy? *Journal of European Social Policy* 15: 301-327.
- Mays, N., Pope, C., & Popay, J. 2005. Systematically reviewing qualitative and quantitative evidence to inform management and policy-making in the health field. *Journal of Health Services Research & Policy* 10: S6.
- Midgley, G. 2000. *Systemic Intervention: Philosophy, Methodology, and Practice*, Kluwer Academic/Planum Publishers, New York.
- Ministry of Health 1997. *Food and Nutrition Guidelines for Healthy Children Aged 2-12 Years: A background paper*, Ministry of Health, Wellington.
- Ministry of Health 1998. *Food and Nutrition Guidelines for Healthy Adolescents: A background paper*, Ministry of Health, Wellington.
- Ministry of Health 2000. *New Zealand Health Strategy*, Ministry of Health, Wellington.
- Ministry of Health 2001. *The Primary Health Care Strategy*, Ministry of Health, Wellington.
- Ministry of Health 2003a. *Food and Nutrition Guidelines for Healthy Adults: A background paper*, Ministry of Health, Wellington.
- Ministry of Health 2003b. *NZ Food NZ Children: Key results of the 2002 Children's Nutrition Survey*, Ministry of Health, Wellington.
- Ministry of Health 2003c. *Healthy Eating - Healthy Action: Oranga Kai - Oranga Pumau A Strategic Framework*, Ministry of Health, Wellington.
- Ministry of Health 2004. *Healthy Eating - Healthy Action: Oranga Kai - Oranga Pumau Implementation Plan 2004-2010*,
- Ministry of Health 2006. *An analysis of the usefulness and feasibility of a population indicator of childhood obesity*, Ministry of Health, Wellington.
- Ministry of Social Development 2004. *Opportunity for All New Zealanders*, Ministry of Social Development, Wellington.
- Ministry of Social Development, & Inland Revenue 2006. *Receipt of the Working for Families Package*, Ministry of Social Development and Inland Revenue, Wellington.
- New Zealand Government 2006. *Mission-On Information Pack*, Wellington.
- Parnell, W.R., Wilson, N.C., Mann, J.I., & Gray, A.R. 2005. Overview of Food Security Status in New Zealand as a Predictor of Nutritional Outcomes. *Proceedings of the Nutrition Society of New Zealand* 30: 144-149.
- Patrick, H., & Nicklas, T.A. 2005. A review of family and social determinants of children's eating patterns and diet quality. *Journal of the American College of Nutrition* 24: 83-92.
- Pearce, J., Day, P., & Witten, K. 2008a. Neighbourhood Provision of Food and Alcohol Retailing and Social Deprivation in Urban New Zealand. *Urban Policy and Research* 26: 213 - 227.
- Pearce, J., Hiscock, R., Blakely, T., & Witten, K. 2008b. The contextual effects of neighbourhood access to supermarkets and convenience stores on individual fruit and vegetable consumption. *J Epidemiol Community Health* 62: 198-201.
- Pyle, S.A. 2006. Fighting an epidemic: the role of schools in reducing childhood obesity. *Psychology in the Schools* 43: 361-376.

- Rampersaud, G.C., Pereira, M.A., Girard, B.L., Adams, J., & Metz, J.D. 2005. Breakfast Habits, Nutritional Status, Body Weight, and Academic Performance in Children and Adolescents. *Journal of the American Dietetic Association* 105: 743-760.
- Rush, E., Puniani, N., Snowling, N., & Paterson, J. 2007. Food security, selection, and healthy eating in a Pacific Community in Auckland New Zealand. *Asia Pacific Journal of Clinical Nutrition* 16: 448-454.
- Rush, E., Paterson, J., & Obolonkin, V. 2008. Food frequency information - relationships to body composition and apparent growth in 4-year-old children in the Pacific Island Family Study. *New Zealand Medical Journal* 121: 3240.
- Shiell, A., Hawe, P., & Gold, L. 2008. Complex interventions or complex systems? Implications for health economic evaluation. *BMJ* 336: 1281-1283.
- Signal, L., Langford, B., Quigley, R., & Ward, M. 2006. Strengthening Health, Wellbeing and Equity: Embedding Policy-Level HIA in New Zealand. *Social Policy Journal of New Zealand* 29: 17-31.
- Signal, L.N., Lanumata, T., Robinson, J., Tavila, A., Wilton, J., & Mhurchu, C.N. 2008. Perceptions of New Zealand Nutrition Labels in New Zealand by Maori, Pacific and Low-income Shoppers. *Public Health Nutrition* 11: 706-713.
- Statistics New Zealand (2004). Household Economic Survey Year ended 30 June 2004 - Standard Tables 2003_2004 (xls). Wellington: Statistics New Zealand.
- Statistics New Zealand 2008. Hot Off the Press: Food Price Index: October 2008. *Hot Off the Press*, (Access Date 3 December 2008), <http://www.stats.govt.nz/NR/ronlyres/66962894-718C-43B8-B6A6-20B87893F4EE/0/foodpriceindexoct08hotp.pdf>.
- Swinburn, B., Egger, G., & Raza, F. 1999. Dissecting Obesogenic Environments: The Development and Application of a Framework for Identifying and Prioritizing Environmental Interventions for Obesity. *Preventive Medicine* 29: 563-570.
- Swinburn, B., Gill, T., & Kumanyika, S. 2005. Obesity prevention: a proposed framework for translating evidence into action. *Obesity Reviews* 6: 23-33.
- Turrell, G. 1996. Structural, material and economic influences on the food-purchasing choices of socioeconomic groups. *Australian and New Zealand Journal of Public Health* 20: 611-617.
- Turrell, G., & Kavanagh, A.M. 2006. Socio-economic pathways to diet: modelling the association between socio-economic position and food purchasing behaviour. *Public Health Nutrition* 9: 375-383.
- Utter, J., Scragg, R., & Schaaf, D. 2006a. Associations between television viewing and consumption of commonly advertised foods among New Zealand children and young adolescents. *Public Health Nutrition* 9: 606-612.
- Utter, J., Scragg, R., Schaaf, D., & Fitzgerald, E. 2006b. Nutrition and physical activity behaviours among Maori, Pacific and NZ European children: identifying opportunities for population-based interventions. *Australian & New Zealand Journal of Public Health* 30: 50-56.
- Utter, J., Scragg, R., Mhurchu, C.N., & Schaaf, D. 2007. At-Home Breakfast Consumption among New Zealand Children: Associations with Body Mass Index and Related Nutrition Behaviors. *Journal of the American Dietetic Association* 107: 570-576.
- Wall, J., Mhurchu, C.N., Blakely, T., Rodgers, A., & Wilton, J. 2006. Effectiveness of Monetary Incentives in Modifying Dietary Behavior: A Review of Randomized, Controlled Trials. *Nutrition Reviews* 64: 518-531.
- Whitehead, M. 2007. A typology of actions to tackle social inequalities in health. *Journal of Epidemiology & Community Health* 61: 473-478.

- World Health Organisation 2003. Diet, Nutrition and the prevention of chronic diseases, WHO, Geneva.
- Zimmet, P.Z., & James, W.P.T. 2006. The unstoppable Australian obesity and diabetes juggernaut. What should politicians do? MJA 185: 187-188.

RECONCILING TRUE AND INCURRED COSTS OF BLINDNESS IN NEW ZEALAND

A. Jonathan R. Godfrey
Massey University, Palmerston North

Deborah M. Brunning
Statistics New Zealand, Wellington

Abstract

In 2003 the Royal New Zealand Foundation of the Blind commissioned independent research to gain a greater understanding of the costs of blindness faced by its 11,300 blind, deaf-blind and vision-impaired members. The most common cost incurred by survey respondents was that of taxi use, which is used in this paper as an example of the difference between an incurred cost and a true cost of blindness. This difference is initially discussed in a qualitative framework, and then quantified. The survey data showed that many blind and vision-impaired individuals face restrictions on their use of such services as taxis due to their limited financial resources when mitigating the effects of their vision loss. This paper demonstrates why the constraints on expenditure need to be identified in order to provide better estimates of the true costs of blindness. These findings have relevance for the planning of any future investigations into the costs of disability or other similar social research.

INTRODUCTION

New Zealand is just one country where the costs of disability are partially funded through the provision of welfare support payments. The level of these payments must be set at a realistic amount to help meet the social policy objectives set by the Government for its community of disabled people. In turn, these policies need to be determined using accurate information about the actual cost of disability.

In 2003 the Royal New Zealand Foundation of the Blind (RNZFB) commissioned research into the costs of blindness in New Zealand. At that time the membership of the RNZFB included approximately 11,300 people who met the eligibility criterion that “In the opinion of a registered ophthalmologist or optometrist the person’s visual acuity does not exceed 6/24 in the better eye with corrective lenses, or there are serious limitations in the field of vision generally not greater than 20 degrees in the widest diameter.”¹ The membership of the RNZFB is growing, and stands at approximately 11,700.²

The vast majority of the RNZFB’s membership are 65 years of age or older, with approximately half its members over 80 years of age. While it may be interesting to investigate the quality of life for these older people and attempt to determine a financial cost for the reduction in the quality of life that results from vision loss, it is the working-age blind and vision impaired whose access to work and other aspects of social inclusion that have received the most scrutiny.

¹ www.rnzfb.org.nz.

² www.rnzfb.org.nz, September 2008.

The increase in the development and implementation of “welfare to work” policies has, and will continue to have, an impact on the approximately 3,000 RNZFB members of working age. The merits of such policies are not considered in this paper, but this discussion may help inform the debate about how governments may wish to compensate for the costs of disability that arise as a direct consequence of an inaccessible society. The New Zealand Disability Strategy clearly recognises the social model of disability in preference to the medical model (Dalziel 2001), and it is in this vein that the current investigation was carried out.

The true cost of blindness could be defined as the total amount of extra time, money and other resources that a blind or vision-impaired person must expend or have expended on their behalf to attain the same quality of life as their sighted peers. The research commissioned by the RNZFB gave an analysis of the incurred costs for 200 respondents. However, the use of incurred costs has limitations when relating these costs to the definition of the true cost of blindness presented here. For example, no attempts were made to deal with reduced opportunities, whether through lost income, reduced avenues for recreational activity or the effects on interpersonal relationships.

The primary analysis was based on survey questions that were determined by the independent researchers using knowledge gained from the literature and from focus group sessions (Gravitas Research and Strategy Ltd and Market Economics Ltd 2006). The survey respondents were not a simple random sample of RNZFB members, with the working-age membership being over-sampled. Stratified random sampling was used, and this forced the primary analysis to incorporate the use of survey weightings when estimating average costs for all blind people. This paper does not address the quality of the data collected in the primary analysis. There are reasons why the data may be regarded as inferior, but the primary analysis is the best that has been conducted in New Zealand. Researchers wishing to undertake costs of disability research in the future should refer to that report and consider the decisions taken by those researchers separately from this supplementary analysis.

The quantitative data were collected during 2004 using a telephone-based survey questionnaire, chosen because of the inability of the target population to use other forms of data collection. It showed that a diverse range of costs were incurred, but, notably, the cost most frequently incurred by respondents was the use of taxis to undertake non-optional short-distance travel that was for purposes other than getting to work. This incurred cost should therefore take account of only those expenses that were borne by the survey respondent, but it is unclear whether the cost includes any subsidy through avenues such as the Total Mobility Scheme, which is not available to all blind people living in New Zealand due to geographic differences in the coverage of that scheme.

Anecdotal evidence suggests that taxi usage is the most-often questioned cost because taxis are often considered to be an expensive alternative to public transport such as buses and trains; there is also a view that the cost of taxi usage by blind and vision-impaired people should be compared to the cost of operating a motor vehicle by their sighted peers. Take, for example, the research produced by Ethical Strategies Ltd (2003), which did not consider the costs of transportation and did not state the reasons for not doing so. There are, however, factors supporting the use of taxis in preference to other forms of transport that can be directly linked to a person’s vision loss.

An unfortunate consequence of using survey methodology to determine the true cost of blindness is that the financial resources of individual respondents may run out before all the effects of their vision loss have been mitigated. The principle reason for the additional research undertaken by the authors was to respond to the following comments made in the initial report:

[E]xpenditure on taxis does not represent all travel undertaken or necessarily indicate total satisfaction of travel needs, i.e. the average spend on taxis by blind and vision impaired users may be low because users simply cannot afford to spend more than it. For twenty nine percent of the 18 to 65 year olds surveyed, cost is the main reason for not taking taxis or not taking taxis more regularly. This finding suggests cost as a constraint on the regularity or freedom with which travel is undertaken.

The survey data showed that an estimated 55% of RNZFB members used taxis for non-optional short-distance travel, while the authors, having reconsidered the raw survey data, estimate that 64% of RNZFB members use or would like to use taxi services. The increase in this estimate is based on the fact that some survey respondents indicated that they did not have the financial resources to pay for the taxis they would like to use. The issue of limited financial resources is not a new problem for researchers wishing to gauge the true cost of disability (see Baldwin 1985, for example), but this current investigation appears to be the first real attempt at estimating the true cost of disability in quantitative terms that allow for these constraints.

The next section discusses the reasons why it is appropriate to use the cost for taxi usage as a measure of the cost of blindness. A model for establishing the total cost of blindness is proposed in the third section, and subsequent sections investigate the issue of estimating the cost of taxis when the constraint of income is removed.

WHAT TAXIS MEAN TO BLIND TRAVELLERS

A primary concern in any social research is how the data collected relate to the information required to meet the goals of the research. Evaluation of the costs of blindness poses the extra difficulty that the way in which certain costs are perceived by different individuals (both blind and non-blind) may differ markedly. A case in point is the use of taxi services. The reasons a blind person chooses to use taxis are not identical to the reasons their non-blind peers would use them. There are the obvious reasons to do with the inability to drive a car, or ride a bicycle in safety, but the personal safety aspects for a blind person are different to those for a non-blind person.

Anecdotal evidence is easily obtained from blind people which suggests that taxi drivers are used as more than just people who can drive a motor vehicle. A taxi driver can help find a location that is not familiar to the blind passenger (Baker et al. 2000); they can provide additional information on alterations to the physical environment; and they can often help to obtain a working knowledge of a new city. Newbold (1987) reported that taxi drivers had even been used as impromptu guides while leaving the meter running. The cost of using a taxi must be weighed against using other forms of transport such as private motor vehicles. At times a blind person may choose to use a taxi instead of taking up offers from family or friends simply to avoid feelings of indebtedness (Winyard 2006), the convenience in terms of not having to plan around the time frames of others, and immediacy.

The New Zealand Disability Strategy identifies environmental barriers, both social and built, as the cause of disability and therefore follows the tenets of the social model of disability as opposed to the medical model (Dalziel 2001). Costs of disability relating to the medical model are easily identified (see Ethical Strategies Ltd 2003), but expenses incurred to mitigate the costs of disability relating to the social model are somewhat nebulous. The barriers to employment of blind and vision-impaired New Zealanders were investigated by LaGrow and Daye (2005) and show a wide range of barriers, both social and physical. Each individual who experiences barriers in life chooses the best way to circumvent them or incurs expenses to mitigate the effects of these barriers. Some of the expenses incurred are therefore not a direct expense of disability but do form a proxy for the financial value placed on disability. Whatever the particular reason individuals use taxis, the cost incurred was perceived by survey respondents to be a direct cost of blindness. This expenditure was incurred to mitigate the effects of blindness and can therefore be offset against the notion of the true cost of blindness.

A MODEL FOR THE TOTAL COST OF BLINDNESS

It is useful to put the costs of blindness into a framework or model so that we can identify what information we need to obtain to estimate the "total true cost of blindness". We need to recognise that not all blind and vision-impaired people incur exactly the same costs, and that when they do have the same expenditure items they may incur a different amount of expenditure.

Two values need to be identified for each demographic group of blind and vision-impaired New Zealanders if a model for the cost of blindness is to be formulated. Firstly, the proportion of individuals within each group that have a cost must be identified. We assume that not all blind people experience a given cost of blindness and that this may differ from group to group and from cost to cost. Secondly, for those people who do determine a particular expense as a cost of blindness, there will be an average cost those people expend, whether it be in dollars, hours or some other less quantifiable amount.

Given we can convert all costs into dollar terms, we use the model:

$$T_g = \sum_j P_{gj} C_{gj}$$

where the total cost T_g for a given demographic group g of people is the sum of the average cost C_{gj} of activity j for group g weighted by the propensity P_{gj} for members of group g to incur a cost. The model is then somewhat akin to an expected value formula. For example, if we know that there are only three broad cost categories faced by blind and vision-impaired people (travel, home help and equipment), and that these costs are incurred by only a portion of blind women of working age (say $2/3$, $1/2$ and $1/10$), then we would need to combine the average costs for these activities as incurred by blind women of working age in the following way. If the costs incurred were on average \$30, \$20 and \$40 per week, we would multiply the fractions by the relevant costs and find that the average cost of blindness for blind women of working age was $2/3 \times 30 + 1/2 \times 20 + 1/10 \times 40 = \34 per week.

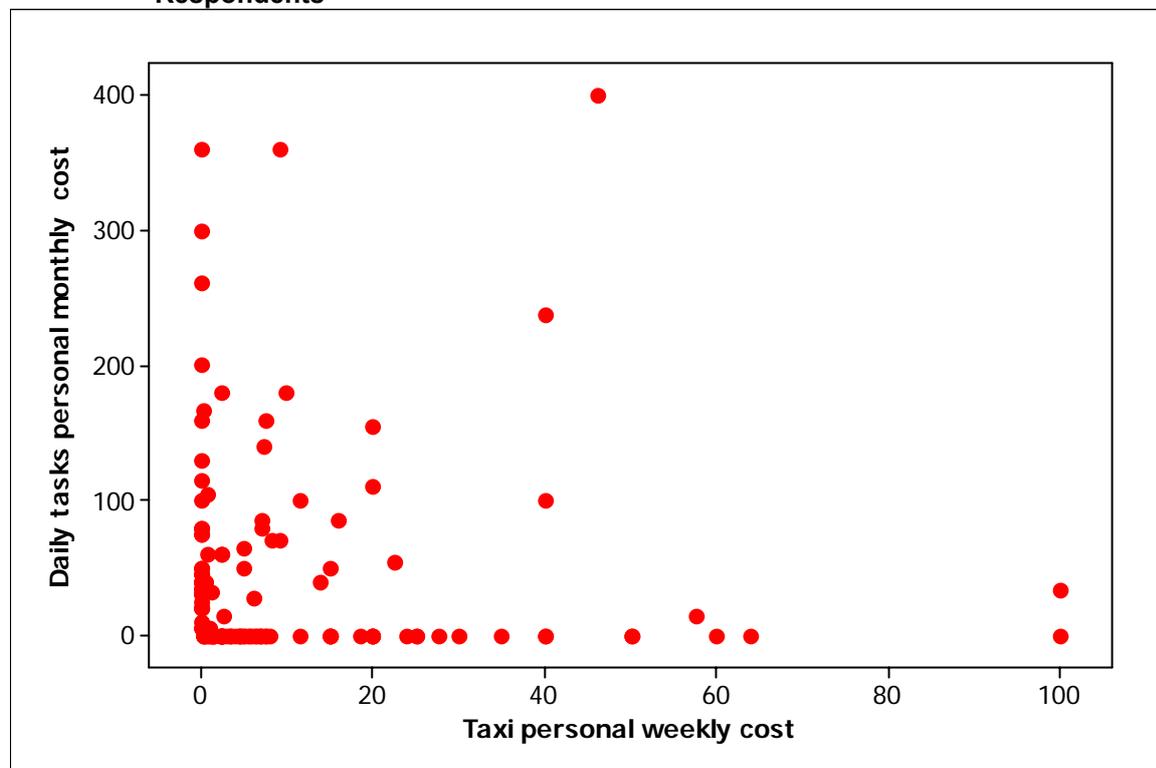
The problem we must deal with is how relevant the estimates we gain from survey data will be to the components of the model given here. It is fortunate that among the questions on taxi use in this research, respondents were asked why they did not use taxis at all or did not use taxis more than they currently do. Approximately a third of respondents stated that they did not need to use taxis more than they currently did, while another third said that taxis were

“too expensive”. The remaining third gave a range of reasons that were not as extreme as the first two categories and cannot be combined with either of them.

This leads to two sub-problems: the propensity to incur a cost for taxis is probably understated, and the average amount of incurred cost for those who did use a taxi is less than the total cost would be if the respondent were able to use taxis as much as they would like in order to mitigate the effects of their blindness.

Another source of restriction on funds is the fact that some blind and vision-impaired people may decide to spend their money on certain costs which they feel best mitigate the impact of their vision loss. This will have an impact on the average amount spent on certain activities, but in reality the true cost of blindness should not have any competition among the various costs. The model given here does not factor in any lack of independence in the incurred costs for this reason. The two most frequently incurred costs of blindness for all survey respondents that incurred either cost are plotted against one another in Figure 1.

Figure 1 Scatter Plot of the Two Costs of Blindness Most Frequently Incurred by Survey Respondents



In this figure the expenditure on taxis for non-optional short-distance travel is compared to the total of five expenditure items for general household upkeep, such as home help with cleaning or lawn mowing. It shows that many individuals who incurred one of these costs did not incur the other cost. The survey data did not enable the reasons for this behaviour to be determined. The interesting aspect of the numeric summaries that can be generated for this data arises as a consequence of the way any calculations treat the individuals who did not incur one of the costs. If the total group of individuals that incurred either cost is used, the Spearman’s rank correlation coefficient for this data is -0.295 and might imply a trade-off, while this correlation is 0.198 if only the individuals incurring both costs are used for the calculation. This relationship was not given any deeper analysis due to the incomplete data on household income and the low number of respondents. As observed by one of this article’s

anonymous referees, any differences in expenditure for the two costs might be incurred by different subpopulations of the survey respondents. The referee's comments help justify the use of the model presented above whereby different subpopulations have a different chance of incurring a particular cost.

Another aspect of the model proposed is that it allows for differences in attitude among blind and vision-impaired people. Some people may describe a cost they incur as a direct consequence of their blindness, while others incurring the same cost may not describe it this way. The propensity to perceive a certain cost as a cost of blindness and an associated average cost for those perceiving the cost as such can be included in the model given here. For example, some people may associate the lack of a driver's licence with a cost of blindness, while others would not necessarily drive even if they could hold a licence. Valuing the cost of not having a driver's licence may prove rather difficult, but if it were measured in terms of lost income, reduced mobility, etc., this could be factored into the calculation of the total cost of blindness. It would certainly differ according to the demographic group whose cost of blindness is being determined.

A second example of a perceived cost of blindness is the difficulty of maintaining or establishing meaningful relationships. Anecdotal evidence suggests that acquired vision loss does have an impact on interpersonal relationships and, as reported on Radio New Zealand's Morning Report programme, can even contribute to the breakdown of a marriage (Radio New Zealand 2006). These examples may in fact be extremely difficult to evaluate accurately in financial terms, especially given the subjective nature of the values that would be placed on activities or events in a blind person's life, but nonetheless an attempt could be made if researchers were interested.

ADJUSTED AVERAGE COST GIVEN FINANCIAL CONSTRAINTS

In this section we show the impact on the total cost of blindness by allowing for the fact that some survey respondents clearly identified that financial constraints limited their use of taxis for non-optional short-distance travel. As noted previously, approximately one-third of the survey respondents stated that taxis were "too expensive" for them to use to any greater degree. For these people, the incurred cost given is assumed to be less than the amount they would have spent on taxis to mitigate the effects of blindness if their finances allowed. In statistics, this is known as "right-censored data" and is a phenomenon arising most frequently in survival analyses, whether these be on product evaluations or in medical research.

Survival analyses generally use time as the most common response variable, with explanatory variables and an indicator variable to state whether the event has or has not yet occurred. The technique is transferable to other data scenarios where right censoring exists, as long as model validity testing is undertaken and no model assumptions are violated.

It is important to note that the 200 survey respondents were not a simple random sample of the RNZFB membership, and that this means survey weightings must be used when analysing the data. Survey weightings determine how many members each survey respondent "represents" from the population, and failing to use them whenever there is any departure from a simple random sample biases analyses towards the over-sampled strata in the sample. The most obvious example of the impact of this use of survey weighting we can provide is the fact that the 100 respondents with an incurred cost for non-optional short-distance taxi use out of the 200 survey respondents actually represent approximately 55% of the 11,300

RNZFB members. We also know that some individuals who did not incur a cost could not do so because they said taxis were “too expensive”. Including these additional individuals raises the estimated percentage of RNZFB members who want to use taxis to mitigate the effects of their blindness to approximately 64%. It is not the purpose of this paper to suggest improvements in policy that would improve the lot of these additional individuals, but the message that there are some people who do not currently meet their needs using taxis because they do not have enough money is clear. These findings support the views expressed as part of the Taken for a Ride campaign being run by the Royal National Institute of the Blind (RNIB) in the United Kingdom (Winyard 2006).

The authors used the statistical software package Minitab for this analysis, although similar analyses could have been performed using many other statistical software packages, including SPSS, SAS, and S-Plus. One note about the weightings must be made at this point. Because survival analyses are usually performed on a set of individuals, the weightings used needed to be integer-valued, and are therefore marginally different to the original survey weightings. Model assumptions were checked for this model and could not show that the use of the survival analysis technique was inappropriate.

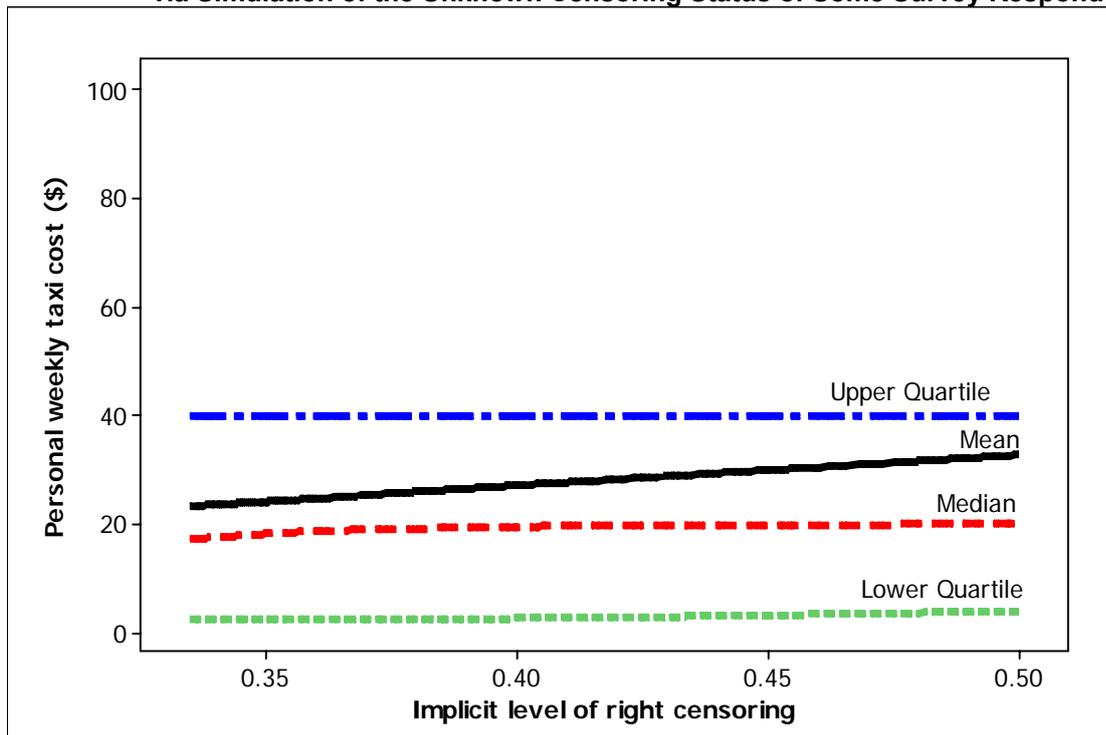
The estimated average cost of weekly taxi usage for non-optional short-distance travel was \$14.52 in the initial report. By allowing for the 34 survey respondents who would have spent more on this form of transport to mitigate their effects of blindness, the estimated average cost rises to \$23.43 per week. Given the low number of survey respondents with incurred taxi costs, no reliable subgrouping can be undertaken.

ADJUSTED AVERAGE COST GIVEN VARYING CAUSES FOR CONSTRAINED EXPENDITURE

This section deals with the problem that approximately one-third of the respondents gave alternative reasons for not spending more on taxis than were investigated in the previous section. Of the 100 survey respondents for which an incurred cost was available, 34 were determined to be right-censored, 33 to be uncensored, and the remaining 33 had an unknown censoring status. To show how these 33 individuals further affect the true cost of blindness met by taxi usage, their censoring status was randomly assigned in hundreds of simulation runs. It is felt that using random allocation of the censoring introduces no additional bias to the current investigation. Other (more subjective) allocations were considered, but each is arguable due to the assumptions made.

Results from the simulation runs leads to two items of information being generated. First, an estimate of the average cost of taxi usage was obtained, and second the implied level of censoring for the population was inferred. Recall that these values are a direct consequence of using a weighted analysis to link the sample weightings with the population weightings.

Figure 2 Estimates of the Mean, Median, Lower and Upper Quartiles of the Costs Determined via Simulation of the Unknown Censoring Status of Some Survey Respondents



Note: The lines have been generated using a loess smoother.

Figure 2 shows the estimated mean, median, and lower and upper quartiles of the true cost of blindness met through weekly expenditure on non-optional short-distance taxi usage for differing levels of implied right censoring. Table 1 shows a selection of these results.

Table 1 Summary Statistics for Estimated Costs Compared with Different Levels of Censoring Obtained Through Simulation

Implicit level of censoring	Estimated summary measures			
	Mean	Median	Lower quartile	Upper quartile
33%	24.02	17.49	2.64	40.00
36%	25.30	18.45	2.69	40.00
39%	26.73	19.48	2.95	40.23
42%	27.61	19.85	3.29	40.98
45%	29.23	20.43	3.51	41.13
48%	30.56	20.69	3.83	49.46

Our results clearly show that the average cost of blindness as determined through the expenditure on short-distance non-optional taxi usage rises as the proportion of surveyed individuals who cannot afford the cost of taxis increases. This rise is caused by the distribution of costs spreading out, which is most easily seen by considering the inter-quartile range.

Without further investigations into the spending habits of survey respondents we cannot provide reliable estimates of the total cost of blindness, but we can see that the true cost of blindness is greater than the sum of incurred costs. We can only surmise that different costs will have different levels of censoring depending on the relative importance individuals place on different costs as mechanisms for mitigating their vision loss.

CONCLUSION

In this paper we have presented evidence of the impact financial constraints have on the true cost of blindness faced by New Zealand's blind and vision-impaired community. This impact has been demonstrated using short-distance non-optional taxi costs as an example; this was only possible due to the inclusion of a survey question on why taxis were not used more frequently by survey respondents. We found that the true cost of blindness was substantially underestimated if only the actual incurred costs were considered, and showed that this understatement is dependent on the level of censoring in the data.

Even if the value of the example is questioned due to any perceptions of poor data quality, the authors hope that more meaningful results will be obtained by including similar questions in social research surveys on expenditure. The addition of questions that uncover reasons behind any limited expenditure will lead to more informed policy decisions. Work remains to be done to determine how the issue of censored data could be incorporated into other data collection techniques.

We have shown that the additional sophistication of the statistical analysis is easily obtained by using the survival analysis routines available in the vast majority of specialised statistical software packages. These analyses can even be obtained when data are collected from a sample that is not a simple random sample from the population, meaning that survey weightings must be used.

REFERENCES

- Baker, M., T. Thornton, A. Vernon and S. Winyard (2000) *Campaign Report 12: The Costs of Blindness*, Royal National Institute of the Blind, London.
- Baldwin, S. (1985) *The Costs of Caring: Families with Disabled Children*, Routledge, London.
- Dalziel, L. (2001) *The New Zealand Disability Strategy: Making a World of Difference*, Ministry of Health, Wellington.
- Ethical Strategies Ltd (2003) *The Costs of Blindness: An Analysis of the Costs of Visual Impairment and Blindness in the United Kingdom*, Guide Dogs for the Blind Association, Kingston Upon Thames.
- Gravitas Research and Strategy Ltd and Market Economics Ltd (2006) *The Cost of Blindness in New Zealand*, Royal New Zealand Foundation of the Blind, Auckland.
- LaGrow, S.J. and P. Daye (2005) "Barriers to employment identified by blind and vision-impaired persons in New Zealand" *Social Policy Journal of New Zealand*, 26:173–185.
- Newbold, G. (1987) *The Costs of Blindness*, Royal New Zealand Foundation of the Blind, Auckland.
- Radio New Zealand (2006) A news item from *Morning Report*, lead in by Geoff Robinson, story presenter Karla Gray, 8:28 am, Monday 20 March 2006 [available from first author on request].
- Winyard, S. (2006) *Campaign Report 26: Taken for a Ride*, Royal National Institute of the Blind, London.