



# **Growing Ethnic Diversity in New Zealand and its Implications for Measuring Differentials in Fertility and Mortality**

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## 1. Introduction

The issues surrounding ethnicity, cultural diversity and what has been referred to as the changing ethnic mosaic of New Zealand have taken on a new level of interest in recent years as immigration policies have changed and emigration has had an impact. Not only have the source countries of migrants to New Zealand changed in significant ways in the last few decades, but there have also been increasingly large outflows of migrants seeking economic, social and employment opportunities elsewhere.

However, ethnic diversification and complexification is not something specific to New Zealand. As Zelinsky and Lee have observed with reference to the United States of America, and equally applicable here, “we are in the midst of a profound remaking of the relationship between people and place that is both rapid and radical, a reordering of basic perceptions and behaviour” (Zelinsky and Lee, 1998, 283). As they note, this is a global phenomenon within which the New Zealand experience fits neatly.

This paper reflects on growing ethnic diversity in New Zealand and discusses various issues relating to measuring ethnicity in statistical collections. An historical overview provides a context within which to explain the collection of data on race, ethnic origin and ethnicity, as these concepts have changed over time. The key shift over time has been the move from using the biological concept of race or ethnic origin to using the socio-cultural affiliation concept as the basis of ethnicity. The paper focuses on census and vital statistics data and considers some of the implications of changes of, and incompatibility between, questions in various collections, as well as the impact of these issues on derived fertility and mortality measures.

### 1.1 European settlement

Prior to the arrival of Europeans, Māori society in New Zealand was far from homogenous: inter-hapū and inter-iwi (inter-tribal) competition was fierce. The importance placed on ancestors and whakapapa (lineage) as well as variations in customs and mythology between iwi meant that, by many of the criteria that are now used to define ethnic groups, New Zealand was home to a number of distinct populations. Arranged marriages for political or trading purposes were however not uncommon, since iwi were often in direct competition for land and resources. This became quite complex and, as Ballara has noted, “by the 18th Century, through the ongoing process of intermarriage, many hapū could not regard themselves as belonging to one iwi; they had descent lines from several” (Ballara, 1998, 169). The common practice of regarding “hapū” as a constituent component of an iwi is open to criticism.

The arrival of sealers, whalers, explorers and traders in the late 1700s did little to change this. Indeed, in many respects this group, which were later sometimes referred to as Manuhiri (visitors) or Pākehā (non-Māori), were simply a new iwi with which to trade, form alliances and compete for resources.

Although the first new settlers were primarily, but not entirely, European, they came from a number of distinct ethnic groups, cultural backgrounds and social classes. New Zealand offered an opportunity to escape past prejudice. Inter-marriage was common even among groups that had not traditionally mixed. Set against this background of cultural mixing, and the fact that male settlers vastly outnumbered females, it is hardly surprising that Māori and non-Māori societies interacted and there were many inter-marriages.

The generations born during the nearly 200 years since the first colonial settlements became established have provided significant opportunity for miscegenation of New Zealand's Māori and other ethnic populations. Indeed, New Zealand's early colonial government considered that what was then referred to as the Māori race would eventually be absorbed into the European population. This assumption of assimilation, while long since discredited, strongly influenced the collection of official statistics for much of the twentieth century. Respondents were routinely assigned to an ethnic grouping on the basis of ancestry (degree of blood), with little or no regard to lifestyle, culture or beliefs.

In part, the impetus for the compilation of ethnic statistics may be traced to the nation's founding document, The Treaty of Waitangi, and the need to monitor adherence to and performance of its provisions. The Treaty recognised New Zealand of the time as one nation but two people: one, the indigenous Māori people, who have inhabited Aotearoa for over 1,000 years and two, the non-Māori, mainly European settlers and their descendants. This bi-racial model and the later bi-cultural model would seem to sit relatively comfortably with the view that a person belonged to one group or another, viewed from within a Eurocentric paradigm. Māori culture however places great importance on whakapapa. Not surprisingly Māori are reluctant to choose between iwi – indeed it is a breach of the Treaty to require such an action – and this reluctance extends to a reluctance to deny non-Māori sections of their family lineage. Thus for many, the idea of being asked to identify with only the Māori ethnic group could give offence to their non-Māori ancestors, just as any subsequent assignment of people to only one of the groups they have specified would be disrespectful to that individual.

While there had been settlers from many parts of Europe as well as Asia in the earlier settlement periods, as the twentieth century proceeded, the country became increasingly entrenched in the British worldview and strong xenophobic attitudes dominated. While there was a diversity of settlers from other parts of Europe, such as Italy, Greece, Dalmatia and the Austro-Hungarian empire, these communities remained isolated and regarded as foreign. At least in part this was fuelled by the emotions of the First and Second World Wars.

Following the Second World War, in particular, significant migration from the Pacific Islands introduced a relatively new component to the population. This population grew quite rapidly during the late 1960s and early 1970s, becoming the target of much of the racial tension of the day. One of the key drivers in the reduction of this tension and the ultimate acceptance of Pacific people as a major component was a rapid increase in intermarriage and formation of partnerships with other communities and, in particular, with the New Zealand Māori population. By the late 1990s a large

proportion of Pacific people were born in New Zealand and increasingly their children were also of Māori and other ethnicities.

The fourth major component of the New Zealand population, the Asian component, actually predates the Pacific component. There had been people of Asian ethnicity living in New Zealand from the early days of European settlement, albeit in very small numbers. During the period of gold rushes later in the nineteenth century the number of Chinese temporary settlers both from China and from Australia and America increased sharply. This was an interlude in many respects, though there was a small population which remained and settled permanently. However, a century later in the 1980s and 1990s the number of people of Asian ethnicities grew rapidly, and they are likely to exceed the Pacific population within the next few years.

A more recent fifth component comprises refugees and other settlers from Africa and the Middle East, most recently from Somalia. While there had been previous settlers from the Middle East, such as Syrians, people from Equatorial Africa have been very few in the past. This component is in general too small and recent to generalise about their likely impact on ethnic diversification.

## **1.2 Derived statistics on ethnicity**

Given the complexity of the relationship which exists between ancestry and ethnicity, it is perhaps not surprising that for many people the decision to identify as belonging to an ethnic group may also, or even primarily, depend on a large number of non-genetic factors. As Pool (1991, 13) has noted, “policy analysts, administrators and statisticians are faced with a situation in New Zealand which is complex and is bound to become even more so.”

However, despite the wider issues of what the terms mean or what the responses actually reflect, when asked about their ethnicity very few people have difficulty in responding. It is perhaps this certainty that prompted question designers to assume that, like sex or date of birth, ethnicity was fixed at birth and immutable. Certainly this was the traditional approach to statistics gathering in New Zealand, whereby ethnicity was viewed as a variable which could be precisely measured, which could even be derived for each individual and which remained unchanged from birth to death. The idea that an individual could legitimately self-identify with only some, or even none, of their biological lineage had little place in earlier official statistics – if your father was full-NZ Māori and your mother non-Māori you were by default half-Māori regardless of your cultural beliefs, upbringing or cultural affiliations.

Collection agencies appear to have felt that questions relating to ethnic information could be altered with respect to level of detail required of a particular survey, or to match the style or space available on a questionnaire, without materially affecting the results. In the past, the ethnicity questions used by different collections were rarely comparable questions, yet comparability of output was assumed by data users. The recent push to standardise questions across collections has, however, revealed that comparability in output cannot be assumed when different questions are asked, nor even if the same question be asked but by a different collection method or in combination with different neighbouring questions. In short, while the trends revealed by past ethnic indices may have some validity, it is now clear that virtually all derived

historical ethnic indices were misreported or misused because of some degree of inconsistency between numerators and denominators.

## **2. Ethnic questioning**

### **2.1 What is ethnicity?**

In current statistical usage, the term ethnicity is used to refer to the ethnic group or groups a person identifies with or feels they belong to. Increasingly ethnicity is used in conjunction with terms such as socio-cultural affiliation. Moreover, the idea that people identify primarily with only one ethnic group does not match reality and is not acceptable to many respondents. They feel that only identifying one ethnic group (or ranking their ethnicities) is disloyal to a branch of their family or does not adequately reflect the complexity of their personal ethnic space.

While ethnic questions attempt to discourage responses that are based on nationality or citizenship (primarily because nations typically subsume many ethnicities, but uniquely bound very few), it is a practical reality that some of these categories are included in the “self identified” ethnic classifications. A number of reasons may be cited to explain this. Many New Zealanders, Australians, Canadians, Americans (i.e. US citizens), etc., no longer feel any links to the cultures to which their ancestors may have belonged but do not have a well established term other than their nationalities. Moreover, for many people living in New Zealand, English is not their first language and when completing a form in English, they may supply a descriptor which refers in fact to the name of their country of birth. Indeed, there are indications that a proportion of those people recorded as “New Zealand European” by the census may not have any European ancestry (refer Section 3.1 below). This may apply especially to those people who gave “New Zealander” as a response and who, in 1996 for example, were consequently coded to “New Zealand European”. While it might be assumed that the majority of people are answering correctly on the basis of cultural affiliation, undoubtedly some are using citizenship or residence status as the basis for their response.

Among the important issues are: how an ethnic group is defined, how it defines itself, and how individuals of more than one ethnicity are classified and counted. Moreover, not only do collection methods, questions and interpretations change over time, but the underlying concepts also change. In general, these conceptual changes should be the driver for changes in the data collection processes, but often awareness of change results from unexpected effects in the data and process change becomes reactive rather than objective. In New Zealand there is a major emphasis on Māori data, and this has been accompanied by an explicit shift from a biologically based focus to one of socio-cultural self identification. Nevertheless, it has been noted that “even where the census question was framed in terms of genetic composition, many respondents already selected their answer to it on cultural/ethnic criteria” (Gould, 1992, 38; Jackson, 1998, 71-72).

Such an amorphous definition of ethnicity causes significant difficulty in analysing data using traditional methods. A person’s self perceived ethnicity might differ considerably from how others would view them. Moreover, self-perceptions may vary

as a person ages, or their social networks change, or depending on their duration of residence in New Zealand. They could also vary given the circumstances/method of collection, with changes in political climate or in anticipation of how the collected data may be used. Fluidity in ethnic reporting is far from ideal from a statistician's perspective, nevertheless, it reflects the reality of New Zealand's current ethnic make-up.

Consistent ethnic questioning between collections and over time may help mitigate many of the currently perceived data limitations. However, both the concepts involved and practicalities dictate that in most collections ethnicity must remain a self-administered question. It is to be expected that in every case where the data is not based on self identification, such as where the data must be sought from a proxy (as in births and deaths data) there will be a significant difference in reported ethnicity.

While analysis of ethnic data continues to clearly indicate wide disparities in the well being of New Zealanders (sections 3.3–3.6), and while it is required by statute in some collections (such as the Census of Population and Dwellings), there are clear grounds to continue collecting ethnic statistics. Indeed, if difficulties in collecting and analysing data were the sole grounds for not attempting to collect statistics, many key demographic, social and economic indicators would not exist.

## 2.2 History of census questions

As New Zealand society has evolved so has our understanding of terms like race and ethnicity. Up until the 1926 New Zealand Census of Population and Dwellings, the census question was direct and simple, asking:

Race:- If of European descent, enter **European**; if not, enter **Maori, Chinese, Indian, Syrian, Maori-European half caste, &c.**, as the case may be. . . . .

The 1936 Census question was the first to acknowledge that reality was often more complex. It attempted to capture this complexity by introducing fractions, e.g.:

Race:- If of European descent, enter **European**; if not, enter **Maori, Chinese, Indian, Syrian, Negro, &c.**, as the case may be. If more than one race give particulars, as:  $\frac{3}{4}$  **European** -  $\frac{1}{4}$  **Maori**;  $\frac{1}{2}$  **Maori** -  $\frac{1}{2}$  **Indian, &c.** . . . . .

Despite changes to wording and layout, the most notable being the replacement of the word "race" with "ethnic origin", the general form of the question remained largely unchanged until 1986.

The term "ethnic" was not used in census questionnaires until 1976 and then it was introduced as "ethnic origin." Up to 1951 the term exclusively used was "race" and then from 1951 to 1971 reference was made to "descent." The 1976 Census is also noteworthy, moreover, because it was the first to include an additional descent/ancestry type question (Lang, 1999).

As the population became increasingly diverse and aware of issues of ethnicity and cultural affiliation, and as Treaty issues were more widely discussed and formally addressed under the auspices of the Treaty of Waitangi Tribunal, respondents found such detailed questioning irrelevant and offensive. They felt that the questions attempted to collect information they themselves didn't possess, or, appeared to assign them to ethnic groups they felt no affiliation with. However, as Jackson has pointed out, "the concept of ethnicity has, in many instances, merely become a substitute for the now scientifically discredited concept of race, while it was the latter that structured and validated not only the initial, but also many contemporary social relations between ethnic groups" (Jackson, 1998, 12).

Progressive attempts to address these issues are reflected in the recent census questions. One of the important reviews (Department of Statistics, 1988) was initiated by the then Department of Statistics following the release of the 1981 Census results. The key finding of this report was that there was distinctly greater relevance in using cultural affiliation in preference to a biological concept as the basis of official ethnic statistics. The consequences of this review were: changes to questions used in the census, progressively moving towards addressing issues arising from the findings through 1986 to 1996; the introduction of related questions in other statistical collections to achieve a measure of comparability, and a growing awareness of data issues (some of which, such as ethnic mobility, had been left largely unaddressed).

The wording of the instruction to the 1986, 1991 and 1996 Census questions on ethnicity was as follows:

- **1986 Census Question:**  
What is your ethnic origin?  
Tick the box or boxes which apply to you.
  
- **1991 Census Question:**  
Which ethnic group do you belong to?  
(Tick the box or boxes which apply to you).
  
- **1996 Census Question:**  
Tick as many circles as you need to show which ethnic group(s) you belong to.

The 1996 Census question not only made more explicit the acceptability of multiple responses, it also encouraged people who objected to the category "New Zealand European/Pakeha" to proceed to European ancestral categories. Further discussion of this issue will be found in section 3.2 below.

### 2.3 Vital Statistics Registration

The Vital statistics Registration System used the following fraction (degree of blood) questions until September 1995.

Birth Registration Form	
<b>MAORI OR PACIFIC ISLAND BLOOD</b>	<p>17. Father: Degree of Maori Blood (if any) and Tribe ..... Pacific Island Blood (if any) state which Island ....</p> <p>18. Mother: Degree of Maori Blood (if any) and Tribe ..... Pacific Island Blood (if any) state which Island ....</p>
Death Registration Form	
<p>22. Father: Degree of (Maori blood and tribe (if any) of father of deceased: ..... (Pacific island blood - state which island):</p> <p>23. Mother: Degree of (Maori blood and tribe (if any) of father of deceased: ..... (Pacific island blood - state which island):</p>	

It is noteworthy that responses were only sought for Māori and Pacific people. Since non-response was acceptable, those objecting to the question would not be challenged if they simply overlooked the question, and in either case they would be arbitrarily assumed to be non-Māori/non-Pacific. Hence, under-reporting seriously affected derived indices and it was virtually impossible to quantify the level of non-response and its consequential impact.

Question marks also hung over the data for other reasons, for example:

- i) For births, the ethnicity of the child was derived from the ethnicity of the parents, however, for unmarried couples the father's ethnicity could not be given unless he consented and signed the form.
- ii) For deaths, ethnicity of the deceased was derived from the ethnicity of the deceased's parents. Consequently, in many cases, it was the deceased's children who were asked about the degree of blood of their grandparents. Given that the question attempted to collect information many next-of-kin did not themselves possess, it is hardly surprising that people found the question offensive, irksome and irrelevant. In many cases, funeral directors were reluctant to seek the details.
- iii) For statistical purposes, a person was only defined as Māori or a person of Pacific ethnicities if they possessed "half or more" Māori/Pacific blood. Thus, many people were excluded from their chosen ethnic group. For example, if one parent were  $\frac{3}{4}$  Māori and the other  $\frac{1}{8}$  Māori then their child would be recorded as non-Māori (less than half Māori blood), regardless of how they viewed themselves or their child.
- iv) Many people misunderstood the question. Unlike the census questionnaire, which gave an example of the type of required response, the vital registration

forms simply asked for degree of blood. As a result, many people simply answered “Māori”, gave an iwi, etc. For statistical purposes, it was necessary to develop rules for assigning a degree of blood to these people.

Following the successful introduction of the ethnic affiliation concept in the census, Statistics New Zealand organised an inter-departmental working group to ensure the standardisation of the ethnic concept across all data collections, including vital statistics registration and hospital statistics.

To bring vital statistics into line with 1996 Census statistics, amended birth and death registration forms were introduced in September 1995. These forms carried an ethnicity question almost identical to the 1996 Census question.

**Ethnic Group(s)**  
*Tick as many circles as you need to show the ethnic group(s) the child belongs to:*

<input type="radio"/> NZ Maori	<input type="radio"/> NZ European or Pakeha
<input type="radio"/> Other European	<div style="border: 1px solid black; padding: 5px; display: inline-block;">Which of these groups <input type="radio"/> Dutch      <input type="radio"/> Scottish <input type="radio"/> Australian   <input type="radio"/> English <input type="radio"/> Other        <input type="radio"/> Irish</div>
<input type="radio"/> Samoan	
<input type="radio"/> Cook Island Maori	
<input type="radio"/> Tongan <input type="radio"/> Niuean	
<input type="radio"/> Chinese <input type="radio"/> Indian	
<input type="radio"/> Other (such as Fijian, Vietnamese)	
<input type="radio"/>	

↓

*Print other ethnic groups here*

The revised birth registration form carries three separate ethnic questions. One seeks the ethnic group(s) the child belongs to, and the other two similarly seek information concerning the ethnicities of the child’s mother and father.

The child’s ethnic affiliation is determined independently of his/her parents. Previously, in those cases where the ethnicity of the father was not known, the child’s ethnicity was determined solely from the mother’s ethnicity. This is a strategic issue, because over 40 percent of births in New Zealand are to couples who are not legally married. Roughly half of these mothers are partnered. In all cases where the parents are not legally married, the father’s details cannot be captured on the registration form without his consent. Moreover, it is no longer considered appropriate to assume a child will automatically belong to an ethnic group simply because one, or even both, parents do.

The revised death registration form only seeks the ethnic groups the deceased belonged to. For funeral directors, administering the form, this was a positive development. The previous practice of asking about the deceased’s parents often drew criticism from next-of-kin. Nevertheless, since the new question applied universally (rather than just to Māori and Pacific populations), funeral directors were somewhat critical of the new question as it meant that it could no longer simply be ignored. It is probably safe to conclude that in many cases the old question went unasked and this is confirmed by a survey which found that previously only 60 percent of funeral

directors were completing the question (Robson, 1999, 39). This was probably the case when families showed no obvious cultural affiliation with Māori or Pacific groups or in cases where the next-of-kin were particularly distressed by the death. With the new form, 90 percent of surveyed funeral directors indicated that they drew information from family, 60 percent indicated that they used birthplace as a guide and a range of other means were used, including 25 percent who used “name/appearance” (Robson, 1999, 26). An earlier Auckland-based study of Māori mortality data also recognised that “the main problem with the death registration data is, not that Maoris are being misclassified as other nationalities (sic!), but that ethnic information is not obtained for all Maori deaths” (Graham et al., 1989, 125). This study further recommended that ethnicity be identified on behalf of the deceased by the certifying doctors rather than funeral directors.

The adoption of the 1996 Census question for birth registration is seen by the New Zealand Health Information Services as an improvement. Also the Wellington School of Medicine has observed: “Now that the numerator and denominator are in line with each other this new time series should be a more accurate analysis of rates” and raise the issue of “whether ‘sole Maori’ or ‘Maori Ethnic Group’ has a closer correlation and is more meaningful to Maori health status and outcome” (Robson, 1999, 20).

## 2.4 Other statistical collections

Generally, other statistical collections, such as abortion statistics, had never adopted the fraction type question, preferring instead a more simplistic question more akin to the 1926 Census question. For example:

Circle your ethnic group:
European      Maori      Pacific Islander      Asian
Other (Specify).....

This style of question, while encouraging a single response, overcame many criticisms by allowing written multiple response. Many commentators claim that the question is very similar to the modern (1986-96) census style question. There is however a very major difference. While the 1996 Census allows for, and perhaps tends to encourage, multiple response, the more simplistic question generally discourages it. As a result, this type of question generally delivers very low numbers of people with mixed ethnicity. At the 1981 Census, almost 60 percent of people who indicated they had any degree of Māori ethnic origin, also indicated they possessed some degree of non-Māori ancestry (blood). There seems to be consistency between 1981 and 1996 data, but even the 1986 and 1991 Census questions, which were more simplistic, still did not constrain responses in this way. There was no way of knowing how the majority of Māori would respond if encouraged to give a single ethnic response, and there remains little comparability between abortion data and census data.

The general rule for analysing this type of data has been to use sole response and to adopt the “sole” Māori population as enumerated by the census as a base. In this

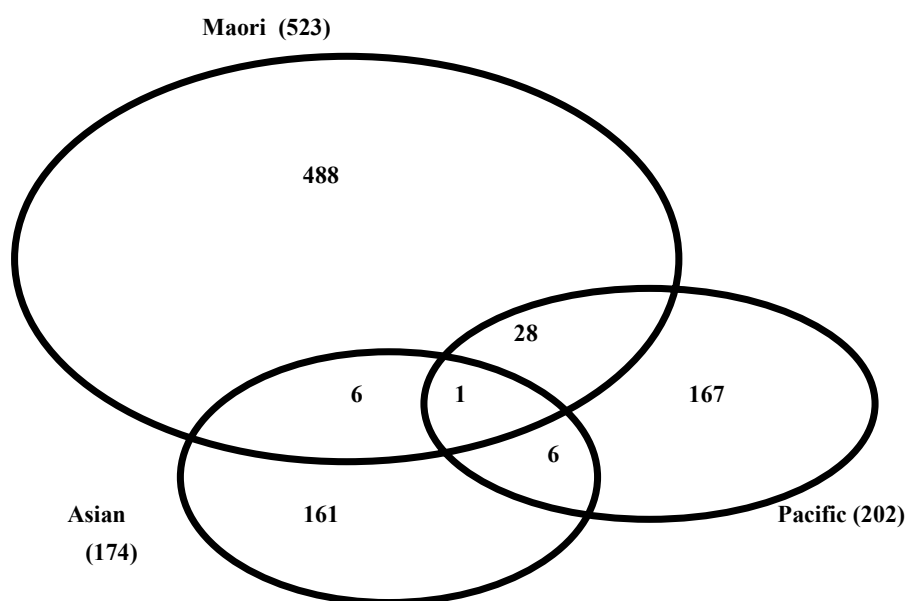
respect, and counter-intuitively, “sole” Māori referred to people who were half or more Māori up until 1981 in the census and up until 1995 in vital statistics. Clearly, this would overstate resulting rates in all cases where the subject collection data had a significantly higher “sole/mixed” ratio than the census. It is a safe conclusion that at least some people, who would have been recorded as “solely Māori” in a collection which encouraged a single response, would respond with mixed ethnicity to a census style question.

Perhaps because of the superficial but misleading similarity of this style of question to modern census questions, collections which encourage single ethnic responses have been slow to adopt standard questions. The degree to which numerators from other surveys and census-based denominators differ is rarely recognised and is not well understood.

## 2.5 Ethnic Specific Data Output

The current Classification of Ethnicity categorises people into 230 different ethnic groups. In the 1996 Census, a maximum of three ethnic groups were captured for any one individual. This results in a staggering 12 million potential different ethnic combinations, not all of which will, of course, occur in any collection in a population as small as that of New Zealand (3.6 million at the 1996 Census). Even if ethnicity is limited to the five highest level output categories (European, Māori, Pacific, Asian, Other) there are sixty different ethnic combinations. Nevertheless, overlaps between ethnic groups are not insignificant, even at the highest level, as revealed by examining the relationship between the Māori, Pacific and Asian ethnic groups.

**Figure 1**  
**Distribution of Māori, Pacific and Asian Ethnic Groups**  
**1996 Census of Population and Dwellings**



Note: populations are in thousands. In each category people may have other ethnicities. For example people with Māori and one or more non-Asian/non-Pacific ethnicities will appear here as only Māori.

**Table 1:**  
**Selected Ethnic Combination Responses 1996 Census of Population and Dwellings**

Selected Combination Responses	Population	
	Number	Percent
Single Ethnicity		
European	2,381,103	68.69
Maori	273,438	7.89
Pacific	124,080	3.58
Asian	141,372	4.08
Other	9,837	0.28
Two Ethnicities		
Two European	162,213	4.68
Two Pacific	7,299	0.21
Two Asian	6,030	0.17
Two Other	393	0.01
European/Maori	170,919	4.93
European/ Pacific	26,109	0.75
European/Asian	10,077	0.29
European/Other	2,916	0.08
Maori/Pacific	13,758	0.40
Maori/Asian	2,088	0.06
Pacific/Asian	3,414	0.10
Other two Groups	450	0.01
Three Ethnicities	131,091	3.78
Total Specified	3,466,590	100.00
Not Specified	151,713	
Total NZ Resident Population	3,618,303	

Thus classifying data into meaningful groups for research, policy planning and other applications presents a number of problems. Three options are in reasonably common use, although increasingly Total Response outputs (option (c) below) are gaining favour.

**(a) Sole Response** – This approach simply counts those people who only gave one ethnicity while all people who gave more than one are grouped as being of “mixed ethnicity”. This approach has some disadvantages. It generally results in an

overrepresentation of older age groups, since younger people are more likely to have mixed ethnicity than their parents/grandparents, partly because of growing miscegenation in recent years and partly because of changes in the concept and understanding of ethnicity. It also excludes people from their chosen ethnic groups in all cases where they have chosen to indicate that they have more than one ethnicity. At the time of the 1996 Census, there were 536,754 people, representing 15.5 percent of the population, with more than one ethnicity. Thus using sole response understates and to some extent misrepresents the size, characteristics and rate of growth of the population of people who consider they belong to each ethnic group.

The sole response concept is sometimes adopted because it is claimed it most clearly demonstrates socio-economic disadvantage or else is chosen where supposedly pure ancestry is important, as in epidemiological studies. However, since the data is skewed towards older ages, care is needed in interpreting sole response data. Moreover, for many ethnic groups sole response disproportionately represents the overseas born component of the population, especially for Asian and Pacific people (Table 2). In the case of Māori, in contrast, only one person in five among overseas-born people of Māori ethnicity reported that they were solely Māori.

**Table 2:**  
**Percentage of Birthplace Populations Reporting One Ethnicity by Ethnic Group and Birthplace Distribution of People with One Ethnicity, 1996 Census of Population and Dwellings**

<b>Ethnic Group</b>	<b>New Zealand Born</b>	<b>Overseas Born</b>	<b>Birthplace Not Specified</b>	<b>Total</b>
Percent of Birthplace/Ethnic Group				
European	84.00	74.57	81.64	82.70
New Zealand Maori	52.48	21.31	64.23	52.25
Pacific	43.81	85.22	67.13	61.36
Asian	53.82	90.88	78.59	81.48
Other	16.04	77.49	53.51	59.91
Percent of People with One Ethnicity				
European	86.74	12.19	1.08	100.00
New Zealand Maori	97.28	0.58	2.14	100.00
Pacific	40.68	57.68	1.64	100.00
Asian	16.52	82.47	1.01	100.00
Other	7.54	91.45	1.01	100.00

**(b) Prioritised** – The second option for output of data on ethnicity is to assign a priority to responses to eliminate all but one response. Each ethnic group is assigned a priority ranking on the basis of population size, so that each person may be assigned to only one of their ethnicities.

Prioritising is achieved by assigning highest value to Māori ethnicity and assigning all people who stated that Māori was one of their ethnicities to Māori. This was followed by selecting any remaining respondents with any Pacific ethnicity (ordered from the smallest resident population in New Zealand to the

largest), then any with an Asian ethnicity, similarly ranked, then any with any other non-European ethnicity and finally those with any European ethnicity.

An overview of the ranking follows:



In 1996, a maximum of three ethnic responses were captured. Since respondents are not asked to rank their chosen ethnicities, prioritised ranking was also used to reduce the responses of people affiliating with 4 or more ethnic groups.

Prioritising has also in the past been a common way of presenting ethnic data, particularly when it is considered desirable for the sum of “ethnic” populations to add to the total subject population. For most ethnic groups, however, prioritised output has an effect on both donor and recipient groups. Although the process is based on population size, it does have an impact on social statistics.

Groups which are perceived to be socio-economically disadvantaged may be assigned population at the expense of groups that are not perceived to be disadvantaged or culturally at risk. For example, people of both Niuean and Samoan ethnicities are lost from the Samoan population, based on the Niuean population in New Zealand being smaller. However, since most of those consequently gained by the Niuean population would be New Zealand born rather than Island-born, Niueans may appear to be more predominantly locally-born purely as the result of prioritising. Similarly, anybody of Niuean, Samoan and Māori ethnicities would be lost from both the Samoan and Niuean populations. Thus, prioritising retains only part of the information respondents gave by excluding people from all but one of their chosen ethnic groups. Clearly, the relative demographic and socio-economic ranking of groups may be misreported purely as the result of prioritising. Moreover, it is considered by some data users that the ranking is rather arbitrary and in effect misrepresents the data by introducing a subjective element which may be misleading.

Since Māori have the highest priority ranking, this approach has no effect on their enumerated population (i.e. it is the same as their total response population), however for other groups the effect can be quite marked (compare Tables 3 and 4). Pacific, Asian and populations of other ethnicities, particularly at younger ages where multiple ethnicities are more common, have significantly smaller apparent populations than revealed by total response.

**Table 3:  
Distribution of Population by Prioritised Ethnicity, 1996 Census of Population and Dwellings**

Prioritised Ethnicity	Population	
	Number	Percent
European	2,594,688	74.8
Māori	523,371	15.1
Pacific	173,181	5.0
Asian	160,680	4.6
Other	14,667	0.4
Total Specified	3,466,590	100.0
Not Specified	151,713	
Total	3,618,303	

**(c) Total Response** – This approach is based on the premise that “a person belonging to more than one ethnic group is counted in each of the specified groups”. For statistical purposes, each specified group can claim that person as a member. It is consistent with how most ethnic groups view their members and also consistent with the fact that no ranking was sought from respondents and each ethnicity is treated with equal value. Since a maximum of three ethnicities is currently captured, a person may be counted up to three times if their responses are in different categories. Data users, used to simple data, sometimes still find this frustrating, as individual ethnic groups will sum to more than the total subject population (Table 4). However, it much more accurately reports the size of each subject population. For Māori and Pacific people in particular, outputs based on sole, prioritised and total response can deliver populations of significantly different relative sizes and characteristics.

**Table 4:**  
**Comparative Distribution of Population by Ethnicity, Various Scenarios, 1996 Census of Population and Dwellings**

Ethnicity	Single Ethnicity	All Ethnicities within Same Group ("Sole")	Prioritised Group	Total responses
European	2,381,103	2,594,688	2,594,688	2,879,085
Maori	273,438	273,438	523,371	523,371
Pacific	124,080	132,192	173,181	202,233
Asian	141,372	147,516	160,680	173,502
Other	9,837	10,233	14,667	16,422

### 3. Census results

#### 3.1 The 1996 Census

Before attempting to place 1996 Census results in historical context, it is worth examining them in their own right. Of the 3,466,590 New Zealand residents who specified an ethnicity at the 1996 Census, 405,666 (or 12 percent) gave two ethnic responses and 131,091 (or 4 percent) gave three or more responses. Perhaps not surprisingly, those with multiple ethnicity tend to be concentrated in younger ages, suggesting ethnic diversity is increasing and will continue to increase in the future.

Multiple ethnic reporting was pronounced among Māori and Pacific populations, 48 percent and 39 percent, respectively, identifying with more than one ethnic group. The level of multiple ethnicity among Pacific people is significant given that the majority of Pacific people with multiple ethnicity are New Zealand-born and immigration from the Pacific Islands has been primarily a very recent feature, occurring largely over the last 30 years.

Because of electoral requirements the census not only asks for ethnicity but also asks whether a person has Māori ancestry. A strong relationship might be expected to exist between the concepts of ethnicity and ancestry but cross tabulating the two concepts proves enlightening (Table 5).

**Table 5:**  
**Māori Ethnicity by Māori Ancestry, 1996 and 1991 Censuses of Population and Dwellings**

<b>Ethnicity</b>	<b>NZ Maori Ancestry</b>				<b>Total</b>
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>	<b>Not Specified</b>	
<b>1996 Census</b>					
NZ Maori (solely)	257,250	2,955	3,561	9,672	273,438
NZ Maori (combinations)	229,146	9,582	4,818	6,387	249,933
<i>Total NZ Maori</i>	<i>486,396</i>	<i>12,537</i>	<i>8,379</i>	<i>16,059</i>	<i>523,371</i>
Non-NZ Maori	88,161	2,651,676	63,954	139,431	2,943,216
<b>Not Specified</b>	<b>5,157</b>	<b>19,365</b>	<b>1,581</b>	<b>125,613</b>	<b>151,713</b>
<i>Total</i>	<i>579,714</i>	<i>2,683,575</i>	<i>73,911</i>	<i>281,100</i>	<i>3,618,303</i>
<b>1991 Census</b>					
NZ Maori (solely)	289,962	7,200	22,281	4,056	323,499
NZ Maori (combinations)	103,149	2,124	5,175	909	111,357
<i>Total NZ Maori</i>	<i>393,111</i>	<i>9,324</i>	<i>27,456</i>	<i>4,965</i>	<i>434,856</i>
Non-NZ Maori	116,907	2,595,765	83,934	114,357	2,910,963
<b>Not Specified</b>	<b>1,266</b>	<b>5,256</b>	<b>687</b>	<b>20,910</b>	<b>28,119</b>
<i>Total</i>	<i>511,284</i>	<i>2,610,345</i>	<i>112,077</i>	<i>140,232</i>	<i>3,373,938</i>

Fifteen percent of those who reported Māori ancestry in 1996 do not claim to belong to the Māori ethnic group. This is perhaps not surprising given the small degree of Māori ancestry some people will now possess (refer section 1.1 above). Moreover, 4 percent of those people who belong to the Māori ethnic group indicated that they were

not descendants of New Zealand Māori or did not know whether they had a Māori ancestor. Indeed, many of these people indicated they were only of Māori ethnicity. In most cases these are people who are likely to have Māori ethnicity by association with the Māori socio-cultural environment, e.g. by adoption, marriage, etc, even though they may not themselves have Māori ancestors. While undoubtedly some respondents have difficulty interpreting terms used (such as ethnicity and ancestry<sup>1</sup>), the fact remains that non-response to these questions (1.4 percent of questionnaires received) was similar to that for many other census questions. Indeed for the ethnicity question, response level was about the same as for age, sex, birthplace and language, and much better than for most other questions.

This suggests that respondents were not having undue difficulty interpreting the ethnic/ancestry questions themselves. However, the information elicited by those questions, while adequately reflecting the context of the respondent as they see it themselves, may not reflect the intention of the survey or be completely comparable to the information provided by other respondents (such as parents or next of kin).

### 3.2 More detailed ethnic response

In 1996, 84.5 percent of the usually resident population (Table 6) and 52.2 percent of the Māori population gave only one ethnic response (Table 4). In 1991, the comparable figures were 95.0 percent and 74.4 percent, respectively. Extreme care is required in interpreting this as a shift since the comparable figures for 1981 were 90.4 percent and 40.0 percent, respectively, which implies that the 1986 and 1991 data may not be representing the same information as the 1996.

**Table 6:**  
**Distribution of People with Specified Ethnicity by Number of Responses, 1981 to 1996 Censuses of Population and Dwellings**

Number of Ethnicities Specified	Census			
	1981	1986	1991	1996
	percent			
One	90.4	95.7	95.0	84.5
Two	9.2	4.0	4.5	11.7
Three	0.4	0.3	0.5	3.8

Even using the definition of “sole” Māori as a person who specified that they were half or more Māori by ethnic origin, the percent of the Māori population who were “sole” Māori was 71.1 percent in 1981. Given the rates of miscegenation, discussed below, this proportion would be expected to fall over time. This indicates that the actual situation and change is far more complex than might appear superficially.

<sup>1</sup> This perhaps contributes to the remarkable difference in patterns between 1991 and 1996 among those with Māori ethnicity but who either have no ancestry or do not know if they do. Intuitively the 1996 pattern, with more people of multiple ethnicity in this category than people only of Māori ethnicity, is what one would expect rather than the opposite 1991 pattern. No clear explanation for this can be found, and it may be an artefact of data editing.

The 1996 Census enumerated 131,000 people with three ethnic responses (a maximum of three responses are captured), a seemingly dramatic rise from 16,000 people with three ethnic responses enumerated in 1991.

The reasons for these shifts may include the new census question (refer section 2.2), which, coupled with shifts in public attitude and understanding of ethnicity in contrast to ancestry, has led to a significant rise in the number of people giving mixed ethnic affiliations. In particular, the question's increased emphasis on multiple response coupled with the introduction of tick box categories for major European groups has undoubtedly altered respondents' perception of the detail required. Moreover, the introduction of the word "Pākehā" as a co-descriptor with "NZ European" is known to be offensive to many people and may have encouraged people to choose alternative European responses to avoid this option. It has also been argued that because NZ European equates to "Pākehā" (i.e. non-Māori) in many people's minds, NZ European and Māori are seen as mutually exclusive categories. The specific European tick boxes similarly overcome this problem; that is, you cannot be Māori/NZ European (Pākehā) however you can be Māori/Irish, Māori/Scottish, etc.

Nevertheless, recent birth registration figures indicate that miscegenation within New Zealand's population is occurring very rapidly. There is evidence of a significant shift in reporting of ethnicity within one generation (e.g. comparing parents with their children). Eleven percent of the mothers giving birth have multiple ethnicity compared to 24 percent of their children. When we consider the history of New Zealand settlement, not only with the rapid rise of intermarriage with New Zealand residents but also with the increasing diversity of immigrant sources, it is clear that much of the ancestral diversity that exists is hidden by the chosen ethnic response(s), or indeed may be largely forgotten. This historical heritage provides the base conditions for continuing fluidity in ethnic diversity. For example, a child with  $\frac{1}{4}$  Māori blood may feel culturally different from their  $\frac{1}{2}$  Māori parent or full-Māori grandparent and, relative to them, may not identify themselves as being of Māori ethnicity. Yet, as these older generations pass, the parents increasingly find themselves comparing themselves, in turn, to their children and grandchildren. Relative to them, they may then see themselves as being of Māori ethnicity and respond accordingly. Conversely, they may form new partnerships with new immigrants (for example) and how they view their ethnicities may change entirely.

Thus, understandably, self-perceived ethnicity may be expected to change over time. In a similar fashion self-reported ethnicity could vary over time, depending on the perceptions of the institution collecting the data and the respondents' perceptions of that institution, the design and method of delivery of the collection instrument, and its perceived intended end-use. For example, collection of detailed information on ethnicity may appear more relevant to both the respondent and the institution when registering the birth of a child than when entering hospital for a minor operation.

### **3.3 Growth in ethnic communities**

Having detailed the difficulty and fluidity of measuring ethnicity in the New Zealand context, it is probably worth taking time to review the disparities implied by census data in growth, demographic characteristics and socio-economic wellbeing of ethnic populations. It is the identification of these disparities which (apart from legal

requirements to do so) in many respects appear to justify the effort required in collecting and analysing ethnic data. However, we need to be very careful to avoid assuming that there is a causal link between the disparities and ethnicity and we also need to be cautious about implying that one or other characteristic is “better” than another. For example, living in extended families or multi-family households may be forced by financial considerations or it may be a cultural choice.

Between the 1991 and 1996 Censuses, New Zealand’s population grew by 7.2 percent (Table 7). Net immigration contributed about a quarter of the growth. However, the net effect of migration understates the large impact immigration has had on specific ethnic populations.

**Table 7:**  
**Population of Selected Ethnic Groupings (Total Responses, New Zealand Resident Population, 1991 and 1996 Censuses of Population and Dwellings)**

Ethnic Grouping	Census		Population Increase (Percent)
	1991	1996	
European	2,783,025	2,879,085	3.5
Maori	434,847	523,371	20.4
Pacific	167,070	202,233	21.0
Asian	99,759	173,502	73.9
Total New Zealand	3,373,926	3,618,300	7.2

Largely because of their high fertility and young population structure the Māori and Pacific populations increased rapidly by a fifth each. Asians had the largest growth, however, up 74 percent. Although, as with the Pacific people this was affected by changes in questionnaires, this was largely as the result of immigration policy changes and the relationship between these and the Asia2000 initiatives which actively promoted New Zealand as an Asian country and as a migrant destination. This saw the migration gain from Asian countries during the 1991–96 intercensal period exceed 67 thousand (Table 8). Without the positive impact of immigration from Asian countries New Zealand would have had a net loss of population to other countries.

**Table 8:**  
**Permanent and Long-Term Migration For Selected Countries of Last Permanent Residence, New Zealand, March Years 1992-96**

<b>Country of Last Permanent Residence</b>	<b>Net Immigration <sup>(1)</sup></b>
Hong Kong	13,000
Korea, Republic of	11,000
Taiwan	10,100
Japan	8,100
China, People's Republic	7,100
Malaysia	6,400
The Middle East	3,700
India	3,500
Total, all countries	67,600

(1) Excess of arrivals over departures

Within the Asian group, neither the migration gain nor the population growth has been uniform. Koreans had the most spectacular growth, up from less than 500 in 1986 to almost 13 thousand in 1996 (Table 9). The Filipino, Japanese, and Sri Lankan communities, and, among people from areas other than Asia, those from the Middle East all more than quadrupled in population. The slow down in immigration from Asia since 1996 was influenced by the return of Hong Kong to China in 1997 and the 1997 Asian economic crisis, as well as changes in the immigration policies of other destination countries, primarily Canada, the United States and Australia, with which New Zealand competes for migrants.

**Table 9:**  
**Asian and Middle Eastern Population Resident in New Zealand, 1986, 1991 and 1996 Censuses of Population and Dwellings**

<b>Ethnicity</b>	<b>Census</b>		
	<b>1986</b>	<b>1991</b>	<b>1996</b>
Chinese	21,933	40,158	70,227
Indian	14,172	28,980	38,403
Korean	426	903	12,657
Filipino	1,458	4,854	8,013
Japanese	1,656	2,790	7,092
Sri Lankan	1,101	2,598	4,569
Cambodian	2,250	4,317	4,302
Vietnamese	1,725	2,667	2,850
Other Asian	771	2,148	3,657
Middle Eastern	1,620	3,222	8,439

The transition to an ethnically diverse population has been rapid. In 1961, Māori made up less than one in ten of the population, while Asian and Pacific people combined comprised just over one percent of the population. In other words, even by 1961 nearly one in ten New Zealanders had at least some non-European ancestry (Table 10), although around half of these people also had some European ancestry. However, by 1996, one quarter of the population was of either Māori, Pacific or Asian ethnicity, and one in six people did not report any European ethnicity.

**Table 10:**  
**Percentage of Population of Selected Ethnicities (Total Responses), New Zealand Resident Population, 1961 and 1996 Censuses of Population and Dwellings**

Ethnicity	Percentage (1)	
	1961	1996
European	94.3	83.1
Maori	8.4	15.1
Pacific Is.	0.7	5.8
Asian	0.6	5.0
Other	0.6	0.5

(1) Total responses: percentages will not sum to 100 percent

Table 11 shows the level of multiple ethnicity within each community. Among Māori, for example, almost half the population reported that they also belonged to another group. Even among the European, as well as the Asian groups (which are predominantly recent immigrants), one in six claimed more than one ethnicity.

**Table 11:**  
**Selected Demographic Features of Selected Ethnic Groups, 1996 Census of Population and Dwellings**

Ethnic Group	People of More Than One Ethnicity	People Born Overseas	People Living Overseas in 1991
European	17.3	13.7	4.7
Maori	47.8	1.4	2.1
Pacific Island	38.6	42.2	8.2
Asian	18.5	74.7	43.9
Total New Zealand	15.5	17.5	6.5

The proportions with multiple ethnicity are larger for the younger age groups among the populations. Table 23 (Section 5.1 below) shows the level of mixing for newborn babies with almost three-tenths of European babies and more than half of Māori

babies being reported as having mixed ethnicity. Clearly, increasing numbers of New Zealand-born children are contributing to the growing multicultural nature of New Zealand.

The 1996-base ethnic population projections (Statistics NZ, 1999) indicate that the proportion of the population which belongs to ethnic groupings other than European will increase further in the future, and suggests that the proportion of each grouping which overlaps with others will also increase. There are three principal reasons for this expected increase:

1. The difference in age structure. The Māori and Pacific communities each have more youthful populations where, for example, the proportion of children under 15 is twice that for the European population. Consequently, these communities have greater built-in momentum for further growth, as do the Asian communities.
2. Differences in fertility levels. Māori, Pacific and Asian groups currently have overall higher fertility than the European population, which has generally experienced sub-replacement fertility since the late 1970s. However, cultural change and growing integration could have a dampening effect in the future.
3. The growing incidence of inter-ethnic marriages or unions. Currently, for example, one-quarter of newborn Māori and Pacific babies derive their respective Māori or Pacific ethnicity solely from their fathers.

### 3.4 Demographic features of ethnic communities

The 1996 Census indicates that even though people of Asian ethnicities are comprised largely of recent immigrant groups (Table 11), one in every four people of Asian ethnicity was born in New Zealand. Similarly, over half of the Pacific population were New Zealand-born. Because of their relatively recent arrival in New Zealand, these groups tend to have a very young age structure when compared to the European population (Table 12).

In 1996, Europeans had a median age of 35 years, with about 13 percent of their members over 64 years of age. This pattern reflects their lower sub-replacement fertility and higher life expectancy, which results in an ageing community.

**Table 12:**  
**Age Structure and Median Age of Major Ethnic Groupings, 1996 Census of Population and Dwellings**

Ethnicity	Age Group				Median		
	0-14	15-64	65 and over	Total	NZ-Born	Overseas-Born	Total
	percentage				years		
European	21.6	65.1	13.3	100.0	32.7	47.3	34.6
NZ Maori	37.5	59.4	3.0	100.0	21.5	14.6	21.4
Pacific	39.2	57.9	2.9	100.0	11.4	35.6	20.4
Asian	26.4	70.5	3.0	100.0	11.7	31.3	26.6
Other	30.7	66.5	2.8	100.0	15.6	29.7	26.6
NZ Total	23.0	65.3	11.7	100.0	30.9	41.0	33.0

In contrast, the Māori and Pacific populations have roughly two-fifths of their populations under 15, only 3 percent over 64, and a median age around 21 years – largely reflecting their higher fertility. The notable feature for Asian people is the high proportion, almost 71 percent, of the population in working ages, as a result of the immigration of young skilled Asian workers and students since the early 1990s. In comparison, around 60 percent of Māori and Pacific people are in the working ages.

**Table 13:**  
**Average Number of Children Born to Women of Selected Ethnicities by Age Group, 1996 Census of Population and Dwellings**

Ethnicity	Age Group (Years)					
	25-29	30-34	35-39	40-44	45-49	50+
NZ European	0.8	1.6	2.1	2.3	2.4	2.9
Chinese	0.5	1.1	1.8	2.1	2.3	3.1
Indian	0.9	1.5	2.0	2.3	2.5	3.5
NZ Maori	1.6	2.3	2.7	3.0	3.2	4.3
Samoaan	1.3	2.1	2.8	3.3	3.5	4.4
Cook Is. Maori	1.7	2.4	3.0	3.2	3.7	4.7
Tongan	1.7	2.4	3.1	3.5	3.5	4.2
Niuean	1.4	2.2	3.0	3.4	3.8	4.7
Tokelauan	1.2	2.4	3.1	4.3	4.3	5.3

Fertility differentials can be clearly seen in the 1996 Census data on the number of children ever born to women of different ethnicities (Table 13). Among those aged 45–49 years in 1996, who have almost completed their childbearing, Māori and Pacific women average between one and two children more than European and Chinese women. European, Chinese and Indian women are delaying childbearing, since a higher proportion of those under 35 years are childfree than are found among Pacific and Māori women (as will be discussed in forthcoming studies on fertility patterns in New Zealand currently being undertaken by the Demography Division of Statistics New Zealand).

### 3.5 Socio-economic features of ethnic communities

Differences in socio-economic wellbeing are equally marked (Table 14). Half of the Māori and Pacific populations aged 15 years and over have no educational qualifications, which partly explains their over-representation in unskilled and semi-skilled occupations.

**Table 14:**  
**Selected Socio-Economic Characteristics for People of Selected Ethnicities and Aged 15 Years and Over, 1996 Census of Population and Dwellings**

<b>Ethnicity</b>	<b>No Educational Qualification (Percent)</b>	<b>Median Income (\$)</b>	<b>Member of One Parent Family (Percent)</b>	<b>Self-Employed (Percent)</b>	<b>English Speaking (Percent)</b>
European	32.8	16,912	13.5	13.0	97.7
NZ Maori	50.1	12,865	33.4	5.1	93.2
Pacific Is.	50.3	12,633	28.1	3.1	83.6
Asian	25.7	8,985	13.2	10.1	78.1
Other	22.6	9,935	17.1	8.6	82.7
Total NZ	35.3	15,604	17.7	11.0	95.3

On the other hand, Asians, many of whom had to meet qualifications/skills criteria before their applications for immigration were approved, have less than one-quarter of their population without qualifications (largely accompanying spouses and refugees). Within this group, only 5 percent of Sri Lankans had no formal educational qualification, whereas, almost two-fifths of Filipinos and Sri Lankans had university qualifications. For Māori, Samoans, Tongan and other Pacific people, the corresponding figure was less than 5 percent.

Another factor in these education differentials is that, apart from refugee and family reunification intakes, which tend to be very diverse in character, most migrants possess higher overall achievement skills than the majority of the population.

These figures sit uncomfortably with income levels, which show the lowest median incomes for Asians. Hence, in the case of people from Asia and other areas such as the Middle East, educational qualifications do not necessarily translate into higher median incomes. One contributing factor may be the non-recognition in New Zealand of recent immigrants' overseas qualifications and experience. Nevertheless, the lower incomes do not appear to be a direct consequence of unemployment (Table 15). Among the factors which could partly explain this are the costs of setting up family businesses, commitments to retraining through full-time study, accepting temporary work, relying on piece work or working outside their field of expertise because of local lack of recognition of their qualifications and the proportion of each population which is outside the labour force for other reasons.

**Table 15:**  
**Employment Characteristics by Age and Ethnicity, 1996 Census of Population and Dwellings**

Ethnicity	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 Years and Over	Total
<b>Percent of Labour Force Employed</b>							
European	83.3	90.5	93.7	94.8	95.5	96.5	94.0
New Zealand Maori	69.6	78.2	81.3	83.7	86.3	89.5	82.5
Pacific	67.1	80.7	85.1	86.7	87.7	88.2	83.3
Asian	76.8	82.7	86.4	85.5	87.6	88.7	85.9
Other	72.9	75.6	76.1	75.1	74.5	81.0	76.8
<b>Percent of Age Group employed</b>							
European	54.7	74.9	77.8	76.7	79.9	53.3	62.6
New Zealand Maori	39.7	56.7	58.0	59.9	63.8	52.3	53.9
Pacific	34.8	59.7	61.8	62.2	63.7	48.0	52.9
Asian	23.9	42.6	59.3	59.1	61.1	49.4	48.4
Other	33.2	48.2	50.8	50.4	53.4	50.4	48.5
<b>Percentage of Labour Force Unemployed</b>							
European	16.7	9.5	6.3	5.2	4.5	3.5	6.0
New Zealand Maori	30.4	21.8	18.7	16.3	13.7	10.5	17.5
Pacific	32.9	19.3	14.9	13.3	12.3	11.8	16.7
Asian	23.2	17.3	13.6	14.5	12.4	11.3	14.1
Other	27.1	24.4	23.9	24.9	25.5	19.0	23.2
<b>Percent of Total Age Group Unemployed</b>							
European	11.0	7.9	5.2	4.2	3.8	1.9	4.0
New Zealand Maori	17.3	15.8	13.3	11.7	10.1	6.1	11.4
Pacific	17.0	14.3	10.8	9.6	8.9	6.4	10.6
Asian	7.2	8.9	9.3	10.0	8.6	6.3	7.9
Other	12.4	15.6	15.9	16.7	18.3	11.9	14.6
<b>Percent of Total Age Group Not in Labour Force</b>							
European	34.3	17.3	17.0	19.1	16.3	44.8	33.4
New Zealand Maori	43.0	27.5	28.6	28.5	26.0	41.6	34.7
Pacific	48.2	26.1	27.4	28.3	27.4	45.6	36.5
Asian	68.9	48.5	31.3	30.8	30.3	44.3	43.7
Other	54.4	36.2	33.3	32.9	28.4	37.7	36.9

Other socio-economic characteristics which differentiate ethnic communities (Table 14) include the high incidence of one-parent families among the Māori and Pacific groups.

NZ Europeans predominantly speak only one language – English. On the other hand, two-thirds of Filipinos and Japanese speak more than one language, which greatly enhances their employment opportunities. Koreans are the least likely of any group in New Zealand to speak English, with 40.7 percent not able to hold a conversation in the language (perhaps reflecting their recent immigration). However, this should not be seen as a negative characteristic. For example, it makes a relatively small difference in unemployment among the labour force – 8.0 percent for non-English speakers and 8.2 percent for English speakers as a percent of all people aged 15 years and over of Korean ethnicity.

However, it must not be overlooked that these larger groupings of ethnicities conceal an enormous diversity within the groups and any general conclusions drawn only from this data must be tempered with considerable caution. For example, while the Korean community has around 8 percent unemployed, the Japanese community has just 3 percent (and here again non-English speakers fair better than their English-speaking members). In all cases these figures conceal the large numbers who are not in the labour force. In the case of the Korean community, 21 percent of the labour force is unemployed. Here, language skill does appear to have a slight effect, with 21 percent of the English speaking labour force unemployed against 26 percent for those who do not speak English.

There are noticeable differences, among migrant groups, between the ability of males and females to speak English, reflecting the more passive immigration of spouses (generally wives) under current immigration policy and their subsequent lower levels of labour force participation.

### **3.6 Geographic location of ethnic communities**

Stepwise movements to larger urban centres and the general northward drift of population have been features of New Zealand's internal population redistribution for most of the twentieth century (Bedford et al., 1999). Immigrants arriving in New Zealand have initially tended to settle in main urban centres with international links and then gradually disperse. Following World War 2, Māori returning from active service tended to settle, along with their families, in major urban areas. This was a notable period of extremely rapid urbanisation for this population. More recently there has been a counter flow of urban to rural migration among Māori. The economic, social, and environmental issues which gave rise to the current urban and northern population distribution, have influenced the dispersal patterns and rates for individual ethnic groups.

Although 83–84 percent of NZ Māori and Europeans live in main urban areas (30,000+ population), they are the least urbanised of the various ethnic groups. Virtually all (more than 99 percent) Tokelauans, Vietnamese, Cambodians, Koreans and Sri Lankans live in an urban area. This reflects the fact that New Zealand's largest cities (particularly Auckland) are the initial destinations for most migrants. Thus further dispersal tends to be against the general trends – although it would be too simplistic to suggest that the flows were unidirectional, since refugee resettlement patterns differ from those of other groups of immigrants. Moreover, the establishment of ethnic communities in the larger cities has had the effect of further slowing dispersal, with most of the growth in the communities outside Auckland resulting from family reunification from overseas. A large proportion of the losses to the regions are not to Auckland, but to Australia.

Auckland is home to 30 percent of all New Zealanders, but only one-quarter of Māori and Europeans (Table 16). But almost two out of three people of Pacific and Asian ethnicities live there. Some temporary ethnic enclaves seem to have emerged in some suburbs with Pacific or Asian being the dominant group (Boswell, 1997), though the detailed nature of this phenomenon is not well understood. Recent work carried out on populations in the United States has suggested that this, in the New Zealand

context, may also turn out to be a very much more complex process than is generally thought (Zelinsky and Lee, 1998).

**Table 16:**  
**Subnational Distribution of population by Ethnicity, 1996 Census of Population and Dwellings**

Percentage of Ethnic Group Living in:	European	Maori	Pacific	Asian	Other	Total
Auckland Region	26.1	24.2	65.2	59.0	47.4	29.5
Rest of New Zealand	73.9	75.8	34.8	41.0	53.6	70.5
Total, New Zealand	100.0	100.0	100.0	100.0	101.0	100.0
North Island	71.6	87.5	93.6	86.9	83.4	75.1
South Island	28.4	12.5	6.4	13.1	16.6	24.9
Total, New Zealand	100.0	100.0	100.0	100.0	100.0	100.0
Main Urban Areas	67.7	61.9	91.0	92.1	88.6	69.4
Secondary Urban Areas	8.0	7.5	3.5	2.6	3.0	7.4
Minor Urban Areas	8.8	13.7	2.6	2.6	3.6	8.7
Total Urban	84.4	83.1	97.1	97.3	95.2	85.5
Rural Centres	2.2	3.6	0.6	0.5	0.9	2.3
Other Rural	13.3	13.3	2.3	2.1	3.9	12.3
Total Rural	15.6	16.9	2.9	2.7	4.8	14.6
Total, New Zealand	100.0	100.0	100.0	100.0	100.0	100.0

#### 4. New Zealand Māori

Historically, among the various ethnic groups which make up the New Zealand population, the Māori population has received more detailed attention. In part this is because they have the longest demographic history in New Zealand, but also data on Māori has had greater impact on government and policy making historically. Hence while data on Māori is more closely scrutinised than that of other ethnicities, where this is available, the issues with this data apply with similar import to people of other ethnicities.

There have been three main approaches to the analysis of this data. The early approach of distinguishing Māori who lived as “natives” from those living as “Europeans” lead to the concept of the “full blood Māori”. These were people who either specified that they were only of Māori blood, or, on some occasions, who did not specify their degree of blood but stated that they were Māori. As the miscegenation of Māori and the rest of the population became widespread, a second approach was developed which intended to identify the population which was predominantly Māori in characteristics. This was done by selecting people deemed to be “half or more Māori” and became referred to, perversely, as “sole Māori” (see section 3.2 above). The third approach considered the total population of people who

specified any degree of Māori blood, and this population has been referred to in recent years as the “Māori ethnic group”. Such a tripartite approach to analysis of ethnicity is almost entirely restricted to the analysis of the Māori population.

#### 4.1 Changes in “sole” Māori population

When historical time-series for the “sole” Māori population are examined (Table 17), the 1996 Census results stand out because of the very obvious change in growth patterns between 1991 and 1996. Data prior to 1996 suggests a fairly steady pattern of growth for the “sole” Māori population, albeit with two distinct periods – prior to 1976 and post-1976. Prior to 1976 the population within the “sole” Māori group who were in fact recorded as of more than one ancestry were growing faster than the population only of Māori ancestry. Change in demographic processes generally tends to occur gradually and any sudden change in a steady process is likely to have been provoked by some external factor. On this basis one conclusion is that either both the 1996 and the pre-1986 data is aberrant or the problem lies with both 1986 and 1991.

It is also clear that there is an issue of comparability of the data for 1976 and the neighbouring censuses, which derived partly from the political environment of the time and partly from the fact that, in this census, all people of Māori ancestry who failed to specify their degree of blood were deemed to be full blood Māori. However, this issue of comparability extends far beyond this instance, and pervades this entire section. It must be stressed at this point that in several cases we are not strictly comparing apples with apples, but by using the best available information we are able to produce a fruit salad which fairly represents the real world situation.

**Table 17:**  
**“Sole” NZ Māori Population Change, 1945-1996 Censuses of Population and Dwellings**

Census	NZ Maori "Sole" Ethnicity (1)		
	Population	Intercensal Change	
		Number	Percent
1945	98,744	16,418	16.63
1951	115,302	16,558	16.77
1956	135,556	20,254	17.57
1961	164,473	28,917	21.33
1966	197,189	32,716	19.89
1971	223,199	26,010	13.19
1976	264,136	40,937	18.34
1981	273,798	9,662	3.66
1986	295,659	21,861	7.98
1991	323,998	28,339	9.59
1996	273,693	-50,305	-15.53

(1) Prior to 1986, "half or more Maori blood". For 1986-96, people who specified only Maori ethnicity

The pre-1995 vital statistics suggested that the “sole” Māori population was growing at approximately 1.7 percent per annum, slightly lower than the 1986–91 annual average rate of change found in census data (1.9 percent). The difference could be partly attributable to differential under-reporting of “sole” Māori among birth and

death registrations (related to questionnaire design and collection issues) as well as unknown net migration flows, since no external migration data for Māori is available.

To some extent new data on vital events also appears to support the notion of a genuine slow-down in growth, indicating that intercensal growth in the “sole” Māori population between 1991 and 1996 should have been approximately 9.8 percent, very close to the 9.6 percent recorded during 1986–91. More detailed examination of vital statistics however reveals anomalies. “Sole” Māori babies born just prior to the census should closely approximate the number found in their equivalent census populations. For “sole” Māori this is clearly not the case. The 1991 Census results suggest that “sole” Māori (½ or more blood) births were under-registered by approximately 24 percent (Table 18). In contrast, 1996 populations suggest that, based on the five months<sup>2</sup> of data prior to census and despite a very similar question in both surveys, “sole” Māori births are now more numerous by as much as 14 percent relative to census.

**Table 18:**  
**“Sole” Māori Births 1987-98 and Corresponding Cohorts, 1991 and 1996 Census of Population and Dwellings**

Year Ended March	Sole Maori Births (1)		Age at 1991 Census (Years)	Enumerated 1991 Sole Maori Population	Age at 1996 Census (Years)	Enumerated 1996 Sole Maori Population
	Sole Response	½ or More Blood				
1998	7,351					
1997	7,120					
1996		7,229			0	6,291
1995		7,272			1	6,300
1994		7,012			2	6,252
1993		7,121			3	6,363
1992		7,096			4	6,498
1991		6,977	0	8,637	5	6,507
1990		6,955	1	8,658	6	6,507
1989		6,686	2	7,833	7	6,105
1988		7,069	3	7,665	8	5,880
1987		6,686	4	7,419	9	5,562
1986		6,399	5	7,215	10	5,400

(1) Ethnicity of child. Births prior to September 1995 are "half or more Maori blood" (based on the "ethnic fractions" of the parents).

Neither the possible effects of migration nor mortality can fully explain either the 1991 or 1996 Census results. Not surprisingly, the release of the 1996 Māori counts has led to significant criticism of the 1996 Census question by some users of “sole” Māori data, and this has been accompanied by calls to revert to the 1991 question. At

<sup>2</sup> Because this is based on only five months of births data prior to the 1996 Census, there may have been an unexpected effect resulting from the way the new birth registration form question was performing, and more directly from the actual uptake of the new form – it is known that some reporting agencies were still using the old form for at least part of this period. Nevertheless, subsequent data would suggest such problems were minimal.

least part of the explanation will lie in the performance of the 1996 Census question with regard to its design and category labels, though a more contentious issue is the validity of such a concept as “sole” Māori.

There are two issues at stake here – the comparability of census data over time, which is discussed below, and how similar questions perform in different environments and in different surveys. Retrospective comparison of vital statistics with census data for “sole” Māori casts some doubt on the 1986 and 1991 Census data. For, if the new 1996 Census question resulted in a smaller than expected “sole” Māori population, then by inference, this question, when used to collect births data, should also record fewer “sole” Māori births than would have been the case if the 1991 Census question had been used by vital statistics.

It can be argued that previously births were significantly under-reported relative to census data. The 1991 Census results at younger ages support this conclusion, to the extent that the 1991 Census enumerated more “sole” Māori than expected in these ages. This was unexpected since both questions encouraged a single response, and, to compound the problem, there is evidence that people in the very young ages tend to be significantly under-enumerated by the census. It may be surmised that the differential is greater than the data shows. However if “sole” Māori births were previously understated then the intercensal growth in “sole” Māori population should have been larger than that recorded during 1986-91 (9.59 percent) unless there had been excessive mortality among this group.

If the 1986–91 intercensal growth were wrong, then, by implication, the 1986, 1991 and 1996 Censuses did not enumerate comparable “sole” Māori populations. The problem with 1986 and 1991 is in part related to the fact that the “sole” Māori population comprises people who ticked only the Māori ethnic group box on their form. This population has been considered equivalent to the “half or more Māori” definition of “sole” Māori. This has some merit in that the population appears roughly consistent for 1986 and 1991 with previous “sole” Māori populations. This apparent consistency, though, may be misleading, since growing diversity in the population suggests that this group should have been smaller, and it would be expected to be more consistent with a 1981–96 trend.

Moreover, infant mortality, census under-enumeration and migration statistics almost certainly cannot totally explain the 14 percent difference between the number of “sole” Māori births occurring in the year prior to the 1996 Census and the enumerated “sole” Māori population aged under one year. Yet if this is true then standardising ethnic questions across statistical collections does not appear to deliver comparable responses for the “sole” Māori concept.

The unexpected change between 1991 and 1996 in the enumerated “sole” Māori population is perhaps more understandable when 1981 Census results are considered. In 1981, 60 percent of people with Māori ethnicity also had non-Māori ethnicity. If this ratio were to be applied to the 1996 Māori descent population of 579,711 (in contrast to the smaller ethnic group population) it gives a maximum “sole Māori” population 15 percent lower than that enumerated by the 1996 Census. Thus, it would suggest that at least one in seven “sole Māori” enumerated by the 1996 Census also have non-Māori ancestry. Despite the different questions in 1981 and 1996, and the

associated uncertainties that this implies in this analysis, it does provide an indication that significant potential exists for movement between the “sole Māori” and “mixed Māori ethnic group” populations and that the data is by no means simple to evaluate. Moreover the higher populations recorded for “sole” Māori in 1986 and 1991 imply that there was an implicit pressure by the questionnaire encouraging respondents to only give one response, a pressure not apparent in the case of 1996.

A very instructive exercise is to examine the developing diversity of the NZ Māori population over time. One way to do this is to look at the census data from 1945 to 1996. This shows that the number of people who reported that they were only Māori (i.e. full-blood Māori in the earlier censuses) grew much more slowly up to 1981 than (a) those reporting that they were half or more Māori (the so-called “sole” Māori) or (b) the total group of those reporting that they were of Māori race/ethnic origin/ethnicity.

From Figure 2 it is clear that, while the censuses of 1986 and 1991 resulted in a smaller than expected ethnic group populations, and the 1976 ethnic group population is slightly larger than expected, these censuses did return “sole” Māori populations which appear consistent with previous censuses. The 1976 result is known to be aberrant<sup>3</sup> and this was at least in part due to inclusion of some Pacific people because of the overstayers debate at that time, but primarily it derived from the passing of the Treaty of Waitangi Tribunal Act in 1975 with a consequential increased acceptability of identifying as being of Māori blood among people of less than half Māori blood. Similarly the number of people in both the full and the “sole” group is higher than expected in 1976, due to a coding decision to include people who did not specify degree of blood for Māori in the full-blood category.

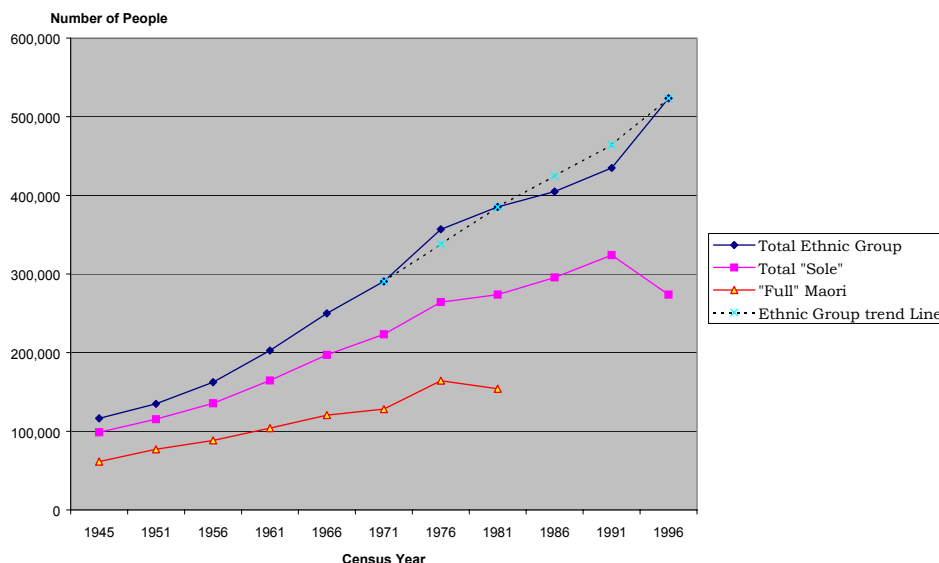
The underlying causes of this phenomenon are socio-political, but the outcome is that, when compared to the 1981 and 1996 Censuses, the questions used in the Censuses of 1986 and 1991 returned too many people of one ethnicity for all ethnicities, not only for Māori. Additionally, an indication of a genuine shift over time, which is obscured by the 1986 and 1991 data, is the trend towards multiple ethnicities. This was already apparent by 1981 with people of two stated ethnic origins (Table 6), though it was not until 1996 that the increases in number of people with three or more ethnicities became clear.

If we examine this data closely, taking into account aspects such as coding decisions and questionnaire changes, and we note the relationship between the data and the trend which is implied (the dotted line in Figure 2), we can conclude that the data over time, even for the total Māori ethnic group, must be approached with some caution, especially when the data is used to substantiate apparent changes in the characteristics of this population. It is substantially more apparent that the concept of “sole” Māori is flawed as a concept on which to base long-term trends, and presents both intrinsic analytical difficulties and serious concerns about comparability with other sources of data ostensibly based on the same concept.

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<sup>3</sup> This can be seen in figure 2 very clearly. By 1971, people only of Māori ancestry (i.e. full Māori) had fallen to below 60 percent of the “sole” group, and this is consistent with the trend up to this point. The 1976 increase is neither consistent nor logical.

**Figure 2:**  
**People of Māori Race/Ethnic Origin/Ethnicity, 1945-1996 Censuses**



#### 4.2 Changes in Māori ethnic group population

Section 4.1 (above) suggests that, in light of recent vital statistics, the last three censuses have failed to enumerate comparable “sole” Māori populations. A cursory analysis would suggest similar problems exist with data for the Māori ethnic group as well as other ethnic groups. Like “sole” Māori, Māori ethnic group data prior to 1996 suggests a fairly steady pattern of growth for the Māori population, again with two distinct periods – pre-1981 and post-1981 (Table 19). Intercensal growth between 1991 and 1996 for the Māori ethnic group appears at odds with recent history if the 1986 to 1991 results were to be considered in isolation, but if the 1986 and 1991 are seen as aberrant, then the pattern is consistent with a longer term trend (Figure 2). A key problem with the 1991 data, which reflects an encouragement for people to specify only one ethnicity, is that while the “sole” Māori was larger than expected as a result, losses to other ethnicities resulted in fewer people overall selecting Māori as their response. This was not noted at the time since it appeared in line with the 1981–1986 shift, ignoring the fact that this was itself an artefact of coding. It did however become clear after the 1996 results became available.

Analysis of recent vital statistics for the Māori ethnic group (based on 5 months of data prior to the 1996 Census) suggests that intercensally the Māori ethnic group population should have grown by approximately 15 percent, compared with the growth of over 20 percent recorded between the 1991 and 1996 Censuses. In her paper, Lang (1999) further attributes growth to mis-recognition and scanning errors during the processing of census data. Thus, only 3 percent of the population change must thus be explained in terms of external migration, non-response, response shift, etc.

**Table 19:**  
**NZ Maori Ethnic Group Population Change, 1945-1996 Censuses of Population and Dwellings**

Growing Ethnic Diversity in New Zealand and its Implications for Measuring Differentials in Fertility and Mortality

Census	NZ Maori Ethnic Group		
	Population	Intercensal Change	
		Number	Percent
1945	115,646	21,593	22.96
1951	134,842	19,196	15.95
1956	162,458	27,616	21.00
1961	202,535	40,077	23.97
1966	249,236	46,701	23.90
1971	289,887	40,651	16.31
1976	356,573	66,686	23.00
1981	385,224	28,651	8.04
1986	405,309	20,085	5.21
1991	435,619	30,310	7.48
1996	524,031	88,412	20.30

Unlike the “sole” Māori population, there appears to be a degree of consistency in the ethnic group data between new birth and death reporting and the 1991 and 1996 Censuses (Table 20).

**Table 20:**  
**Maori Ethnic Group Births 1986-98 and Corresponding Cohorts, 1991 and 1996**  
**Census of Population and Dwellings**

Year Ended March	Maori Ethnic Group Births (1)		Age at 1991 Census (Years)	Enumerated 1991 Maori Ethnic Group	Age at 1996 Census (Years)	Enumerated 1996 Maori Ethnic Group
	Total Response	Maori Blood				
1998	16,010					
1997	15,672					
1996	15,263				0	14,844
1995		14,676			1	14,220
1994		14,482			2	13,980
1993		14,363			3	14,097
1992		14,894			4	14,520
1991		14,431	0	13,401	5	14,403
1990		14,134	1	13,335	6	14,244
1989		12,431	2	12,144	7	13,497
1988		11,791	3	11,736	8	12,891
1987		11,428	4	11,385	9	12,387
1986		10,672	5	10,962	10	11,985

(1) Ethnicity of child. Data prior to September 1995 is based on births where either parent indicated any degree of Maori blood.

The slightly low enumerated 1996 Census populations for cohorts born between 1990 and 1996 is consistent with the effects of differentials in enumeration coverage, non-response, infant mortality, migration, etc. Differences in cohorts born between 1986 and 1991 are more difficult to explain and suggest that response shifts are occurring over time. However, an interpretation of this data is difficult because of the question changes, lack of migration data, inferred differences in enumeration levels and the general passage of time. It should also be noted that some of those children may have been completing their own census forms by 1996 and thus may have responded differently than their parents did on their behalf.

## 5. Vital statistics

Section 2.3 discussed the introduction, on 1 September 1995, of new ethnic questions on the vital statistics registration forms. The new questions had many strategic advantages over the old “degree of blood” questions. Notably, it was no longer necessary to derive the ethnicity of the child or deceased, non-response was now measurable and, ethnic responses could be tabulated for a wide range of ethnic groups.

The impact of these changes is worth noting. The changes in the ethnic question on the birth and death registration forms mean that birth and death statistics for Māori and Pacific people from 1996 onwards are not comparable with those for earlier years.

There are several issues concerning the format of questions and the subsequent capture of data which may have a minor effect on the comparability of census and vital statistics data. This is despite the fact that identical questions are now asked in both collections. Most notable is the fact that ethnicity and ancestry questions follow each other on vital registration forms but were neither sequential nor even on the same page on census questionnaires in 1996, because this was seen as being a problem on the 1991 Census questionnaire. Thus, explicit distinction between the terms ancestry and ethnicity is less likely in census than vital collections.

A second issue is that, both census and vital statistics currently limit respondents to three ethnic responses, however much more detailed ethnic data is collected by census (level 5 of the standard ethnic classification) than in vital statistics (captured at level 2 of the ethnic classification). The same data captured at level two of the classification (vital statistics) can differ from that captured at level 5 (census) when there is an overall limit of three ethnicities captured. For example, if a person indicated they were Rarotongan/Aitutaki Is./Samoan/German, this record would be captured as Rarotongan/Aitutaki Is./Samoan (ie only Pacific) by census, but output as Cook Is./Samoan/ Other European (ie Pacific/European) by vital statistics simply because the output databases of two collections are compiled at different levels of detail.

### 5.1 Births and fertility rates

Traditionally, Māori fertility rates were incorrectly calculated by relating births classed as Māori (ie “half or more Māori”) to the number of Māori women (i.e. “half or more Māori”). However, in recent years a growing proportion of Māori births has been occurring to non-Māori women (Statistics New Zealand 1999; Jackson, 1998). Similarly, a proportion of births to Māori women would not have resulted in Māori children under the “half or more Māori blood” definition.

**Table 21:**  
**Live Births and Total Fertility Rates, NZ Māori Population, 1992-1997**

Growing Ethnic Diversity in New Zealand and its Implications for Measuring Differentials in Fertility and Mortality

December Year	Births		Total Fertility Rate
	Maori Child	Maori Mother	
Half or More Maori blood			
1992	7,238	10,160	2.29 <sup>(a)</sup>
1993	7,131	10,121	2.29 <sup>(a)</sup>
1994	7,053	10,099	2.29 <sup>(a)</sup>
Maori Ethnic Group <sup>(b)</sup>			
1996	15,804	12,726	2.60 <sup>(c)</sup>
1997	16,301	13,176	2.67 <sup>(c)</sup>

(a) Calculated by relating all Maori births (including those born to non-Maori mothers) to Maori women.

(b) Resident population

(c) Based on births to Maori ethnic group women only

Māori births in 1996 totalled 15,804 (Table 21), more than twice the number classified as Māori in 1994. Similarly, the number of Pacific births nearly doubled (Table 22). In part, this upturn was due to the changes to the questions used to collect the information.

**Table 22:**  
**Live Births, Pacific People in New Zealand, 1993-1997**

December Year	Births	
	Pacific Child	Pacific Mother
Half or More Pacific blood		
1993	4,569	4,046
1994	4,281	3,830
Pacific Ethnic Group <sup>(a)</sup>		
1996	7,458	5,938
1997	7,596	5,966

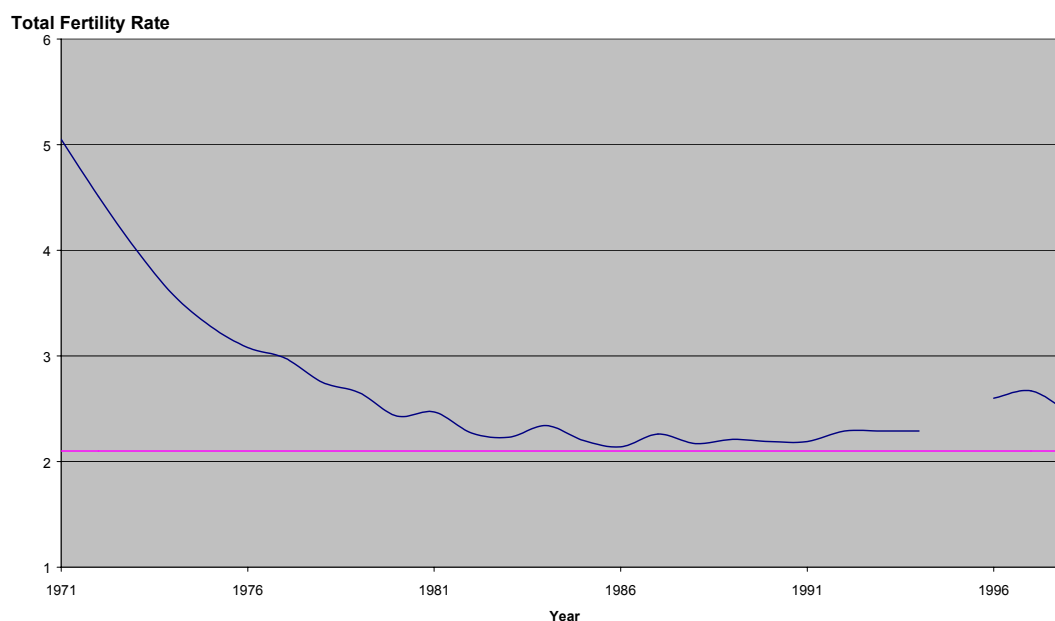
a) Resident population.

In calculating fertility rates a completely different approach is now necessary. An alternative is to calculate the fertility of Māori women, Pacific women, Asian women and so on. One can still work out the contribution of births to the population growth of an ethnic group. But in terms of fertility, it is the fertility of women in an ethnic

group that we are measuring. This means that fertility rates in 1996 onwards are also not directly comparable with those for earlier years.

During the period 1960–1981 the fertility rate for Māori fell rapidly from an estimated 6.2 births per woman in 1962 to 2.5 births per woman in 1981. It should perhaps be noted that both vital registration and census used similar ethnic questions during this period. Despite the divergent ethnic questioning that existed between 1986 and 1996 the total fertility rate for Māori appeared to follow a predictable and steady pattern of decline.

**Figure 3:**  
**Total Fertility Rate, “Sole” Maori Population, 1971-1996**



By 1995, the “sole” Māori fertility rate was estimated to be 2.2 births per woman or only slightly above the theoretical replacement level (2.1 births per woman). The newly-based data for 1996 and 1997 gives fertility rates for Māori ethnic group women of 2.60 and 2.67 births per woman, respectively (Figure 3). Clearly, 1996–97 data based on consistent questioning casts doubt on the “sole” Māori TFRs published during the period 1981–1995 (Jackson, 1998, *passim*). It would appear that a gradual response shift to the two different questions took place during this period. One possible explanation could be that Māori fertility increased sometime between 1981 and 1996, however, it is difficult to be more specific than this, and ongoing research indicates that not only are there more complex factors at work, but factors which have significant policy implications (Jackson, Pool, Cheung, 1994, 13).

The procedural shift to measuring the fertility of women has resulted in calls to similarly measure the fertility of men in particular ethnic groups. An obvious limitation in doing this is the large number of births for which the age and ethnic details of the father are not present. There is some concern that, because the availability of father’s details is influenced by formal marriage, specified cases may not be representative of the whole population. Considerable caution would be needed to interpret such a series. Nevertheless, in deriving ethnic population projections

Statistics New Zealand does attempt to quantify a paternity rate, which relates to the growth of populations of specific ethnicities attributable to males (but not females) of each ethnic group.

Because births reflect the generations of the future, it is not surprising in an environment of rapidly increasing ethnic diversity that birth data shows an ethnic diversity not immediately apparent in census data. Over half (54 percent) of newborn Māori children have mixed ethnicity as compared with 48 percent of the Māori population as a whole (Table 23). For other ethnic groups the divergence is even more marked, 47 percent of newborn Pacific children have mixed ethnic compared with only 39 percent of the total Pacific population. For Asians, the figures are 30 percent and 19 percent, respectively.

**Table 23:**  
**Percentage of Births in New Zealand of Single and Multiple Ethnicity, 1996**

Ethnic Grouping	Ethnicities in Only One Ethnic Grouping	Ethnicities in Two or More Ethnic Groupings
	percent	
NZ European	72	28
New Zealand Maori	46	54
Pacific	53	47
Southeast Asian	53	47
Chinese	69	31
Indian	70	30

By collecting the ethnicity of mother, father and child, the new birth registration form provides an interesting insight into how the dilution of ethnic blood can influence the decision to identify as belonging to an ethnic group. Despite either one or both parents belonging to the Māori ethnic group nearly 800 newborn children were registered in 1997 as not belonging to the Māori ethnic group (Table 24). This equates to 5 percent of births with a Māori parent. A much smaller number of children (121) were recorded as being Māori despite neither parent being reported as belonging to the Māori ethnic group. For Pacific people the corresponding figures were 352 (or 5 percent of births with a Pacific parent) and 53, respectively (Table 25).

Obviously, the intergenerational loss of population by a smaller ethnic group to a larger culturally dominant group is easier to explain than a gain. Indeed, suggestions that the latter may be the result of erroneous responses, e.g. the parent failing to fully record their own ethnicity or wrongly recording their child, cannot be entirely ignored. Moreover, while each form captures up to 30 ethnic responses (10 for mother, 10 for father and 10 for child), the omission of just one ethnicity could result in an apparent intergenerational gain or loss for Māori or Pacific people. Nevertheless, suggestions that the non-Māori/non-Pacific parents with Māori and/or Pacific children may represent rediscovered roots, or that the parent may be making a conscious decision that the child will be exposed to the culture they themselves were denied or have recently begun to adopt, may have some validity.

**Table 24:**  
**Distribution of Maori Births by Ethnicity of Mother, Father and Child, 1997**

Ethnicity of Father	Ethnicity of Child	Ethnicity of Mother			Total
		Maori	Non-Maori	Not Specified	
Maori	Maori	7,250	3,137	13	10,400
	Non-Maori	48	381	2	431
	Not Specified	2	3	3	8
	Total	7,300	3,521	18	10,839
Non-Maori	Maori	3,360	121	3	3,484
	Non-Maori	322	37,961	55	38,338
	Not Specified	7	30	4	41
	Total	3,689	38,112	62	41,863
Not Specified	Maori	2,148	256	13	2,417
	Non-Maori	36	2,393	14	2,443
	Not Specified	3	8	31	42
	Total	2,187	2,657	58	4,902

**Table 25:**  
**Distribution of Pacific Births by Ethnicity of Mother, Father and Child, 1997**

Ethnicity of Father	Ethnicity of Child	Ethnicity of Mother			Total
		Pacific	Non-Pacific	Not Specified	
Pacific	Pacific	3,903	1,583	12	5,498
	Non-Pacific	19	158	1	178
	Not Specified	5	2	0	7
	Total	3,927	1,743	13	5,683
Non-Pacific	Pacific	1,060	53	1	1,114
	Non-Pacific	148	45,656	59	45,863
	Not Specified	2	33	7	42
	Total	1,210	45,742	67	47,019
Not Specified	Pacific	799	182	3	984
	Non-Pacific	26	3,826	24	3,876
	Not Specified	4	7	31	42
	Total	829	4,015	58	4,902

Furthermore, the birth registration forms do not explicitly state the father of the child must be the child's biological father. Thus, even when ethnicities of parent and child would appear contradictory from a biological perspective, they may in fact be a true representation of reality, in terms of ethnic affiliation, for mother, father and child. In the case of ex-nuptial births the father's details will not be included at all unless he both agrees to the data being collected and signs the form himself. It is therefore not possible for these births to make any assumptions about the relationship between the ethnicities of the mother and the ethnicities of the child.

## 5.2 Deaths

While births reflect the emerging generations, elderly deaths represent the passing of generations. Compared to births, few of those dying are recorded as having mixed ethnicity (Table 26).

**Table 26:**  
**Percentage of Deaths in New Zealand by Single and Multiple Ethnicity, 1996**

Ethnic Grouping	Ethnicities in Only One Ethnic Grouping	Ethnicities in Two or More Ethnic Groupings
	percent	
NZ European	98	2
New Zealand Maori	90	10
Pacific	92	8
Southeast Asian	90	10
Chinese	86	14
Indian	88	12

Nevertheless, a quick comparison of older age groups at census and ethnic death statistics would suggest that too few deaths are recorded as having mixed ethnicity. For example, 38 percent of Māori aged 70 years and over at the 1996 Census had mixed ethnicity while only 10 percent of Māori deaths recorded mixed ethnicity. Since traditionally deaths for people of multiple ethnicities have been under-recorded, one obvious explanation would be that deaths of people of mixed ethnicity are being recorded with only one ethnicity. This may or may not be an ethnicity with which the deceased would have identified in life. One way to test this hypothesis is to assume the obverse – that “sole” deaths by age are correct and that the census proportions of “sole” to mixed ethnicity is a suitable predictor for the expected number of ethnic group deaths. For Māori at least, it becomes clear that the expected number of mixed-ethnic group deaths would become unrealistic. Thus, this analysis indicates that people of self-identified mixed ethnicity have been recorded as being of “sole” ethnicity upon their death, and that “sole” Māori deaths are significantly overstated relative to census. Moreover, some deaths may be recorded as being non-Māori for people of Māori ethnicity, implying that deaths for the ethnic group as a whole may be slightly misreported.

Even accepting some under-reporting of mixed ethnic deaths, few deaths would be expected to have mixed ethnicity in the predominant age groups in this data. The 1996 Census indicated that only one in ten New Zealanders over the age of 70 years had mixed ethnicity. Theoretically, therefore, there must be less ambiguity about how the next-of-kin might respond on behalf of the deceased, and changes in the ethnic question should have had less effect on the data than changes to the birth question. Such an assumption however ignores the reality of how the question was administered. Unlike birth registration, which is the responsibility of the parents, death registration is the responsibility of a third party, the funeral director. Given that non-response was a legitimated response prior to September 1995, there are indications that many funeral directors failed to answer the ethnic questions. Also,

many forms contained the simple response of “Māori” or “Pacific Islander” rather than the detailed response in terms of fraction of blood of the mother and father of the deceased. Thus it is possible that some funeral directors simply guessed, based on their knowledge of the family or physical appearances. In contrast, the new question requires an ethnic response for every deceased person. Moreover, the level of detail sought, particularly the identification of individual European groups means that knowledge of the family would seldom be sufficient to guess at a response.

Since evidence would suggest that funeral directors poorly administered the pre-1995 ethnic question, they also tend to be blamed for any shortfalls in the new data. This may be largely unfair, as non-response levels (3 percent) and comments from funeral directors at the Ethnic Death Statistics Workshop, held in Wellington in 1996, would suggest that it was the non-universality of the old question – the question was only asked about the Māori and Pacific origins of the parents of the deceased – that previously caused them problems. Moreover, a recent study has shown that whereas currently the ethnic question on almost all death registration forms is completed by the funeral directors, prior to 1995 they completed around two-thirds (Robson, 1999, 10). This study has also found that there is no consistency in the way in which ethnicity is identified (Robson, 1999, 32). A plausible explanation for the new response patterns is a next-of-kin effect. We have already established that generally speaking each generation is more ethnically diverse than their forebears were. Thus, for example, when people fill in their own census forms they compare themselves with their peers and perhaps their parents (i.e. their parent’s cultural knowledge/beliefs and degree of blood). However, when those people die, their children (as next-of-kin) compare their parent to themselves and their peers (i.e. their own cultural knowledge/beliefs and degree of blood). Understandably, a child is more likely to view their parent as belonging solely to a particular ethnic group than that parent may have viewed himself or herself.

**Table 27:**  
**Deaths by Ethnicity, 1992-1997**

<b>December Year</b>	<b>Maori</b>	<b>Pacific</b>	<b>Total</b>
	Half or more degree of blood		
1992	1,389	301	26,501
1993	1,518	297	27,249
1994	1,405	291	27,092
	Ethnic Group		
1996	2,627	750	28,375
1997	2,551	802	27,599

Because of these factors, the apparent increase in the number of Māori and Pacific deaths following the introduction of the new ethnicity questions was pronounced. In 1994, 1,405 Māori deaths were recorded. These were based on the criteria that those who had died had half or more Māori blood (as derived from their parent’s degree of blood). In 1996, when ethnic affiliation based on self identification was requested, 2,627 Māori deaths were recorded, an increase of 87 percent (Table 27). The number

of Pacific deaths more than doubled, from 291 in 1994 to 750 in 1996. The key point here is that these data are not actually comparable.

This has an immediate and direct impact on apparent life expectancy. If there is an increase in the recorded deaths among specific ethnicities without commensurate changes to the base populations used to derive rates, then the apparent death rate will increase and apparent life expectancy decrease. This has adverse consequences for policy decisions based on differentials between ethnic groups, since the apparent ranking may in fact be purely an artefact of the data and adds an unfortunate element of uncertainty to the debate.

Thus, while a comparison between groups may be made with care for a single collection period, no secure comparisons over time can be made, so no direct assessment of the effects of change can be derived. If the changes are also accompanied by significant increases in reported multiple ethnicities there will be no simple relationship between the changes for individual ethnicities.

## **6. Ethnic data issues – towards an understanding**

Ethnic populations grow in size as the result of fertility, immigration, miscegenation and inter-ethnic mobility gain. They decrease in size because of mortality, emigration and inter-ethnic mobility loss. Ethnic populations are not closed in a biological sense. That is, a female can give birth to a child of different ethnicities if, for example, the father belongs to a different ethnic group, or if the child has different ethnicities than either parent. Thus, in the New Zealand case, non-Māori females can contribute to the Māori population growth and similarly for non-Pacific and non-Asian females. Moreover, since ethnicity represents the self identification of a person's socio-cultural environment (or in the case of a newborn baby, identification by a proxy), there need not be any link between the ethnicities and the ancestry of any of the parties to the registration of the birth, but rather may reflect the environment in which the child is intended to be raised.

Moreover, the increasing occurrence of mixed ethnicities means that cultural affiliations may change over time and thus ethnic responses may vary. Another element might be termed "dilution effects," which is one aspect of inter-ethnic mobility. That is, as each generation becomes ethnically more diverse, the children are less likely to identify with all the ethnicities of their parents. This does not necessarily mean they become less ethnically diverse, merely that the mix is likely to change, with consequential losses to some groups. This phenomenon has been noted in analyses of ethnicity elsewhere also. A person may identify with the ethnicities of the parents, but perhaps will recover ethnicities of their grandparents (Peterson, 1997, 274) or adopt new ethnicities from their peers. Similarly, if each parent identified themselves as being of, say, four ethnicities and each set of ethnicities were different for each parent, it is likely that the child will not identify with all of the ethnicities of the parents, but rather would identify with a subset of these, or maybe with different ethnicities from either parent. This process will have an impact on various demographic rates, including the apparent total fertility rate of specific ethnic groups as well as influencing effective replacement level.

In preparing ethnic projections, Statistics New Zealand tries to account for the above effects by incorporating separate fertility assumptions for Māori women in the ethnic group, and for Māori men in cases where the mother is not of Māori ethnicity (paternity rates), and by allowing for inter-ethnic mobility. This is similarly done for people of Pacific and Asian ethnicities.

Comparisons of demographic estimates and census populations over the last three decades suggest that inter-ethnic mobility resulted in a loss from the Māori ethnic group population of between 0.3 and 0.9 percent per year. This is in line with the dilution effects discussed above. However, continual changes to the ethnic group questions in the 1981 to 1996 period make it difficult to measure recent inter-ethnic mobility. In particular, the changes in the question between 1981 and 1991 and again between 1991 and 1996 means it is impossible to quantify the effects of increased cultural awareness which appears to have (at least in the short-term) resulted in inter-ethnic mobility gains to several ethnic groups.

In recent years there has been greater awareness of Māori issues which may have increased the propensity of people to identify with the Māori ethnic group. Nevertheless, logic would suggest that smaller ethnic groups should generally experience relatively larger inter-ethnic mobility losses to the largest groups than vice versa, particularly over the long-term. Whether the relative magnitudes of these changes result in net losses or net gains to a group largely depends on a number of external factors and may have far reaching consequences for the ethnic composition of the population as a whole, and indeed for our understanding of the process of ethnogenesis.

Census data and vital statistics provide the empirical underpinnings of an understanding of how populations are changing over time and provide base populations or “at risk” populations for deriving demographic, social and economic indices.

Even subtle changes in the questions used in the collection of the data, and the way in which the question is administered, may influence a respondent’s interpretation of the question and the responses collected. Even if questions remain unchanged, as everyday language evolves the meaning attributed to the question will change. Thus it is possible to say 69,780 people identified as Māori in 1926 and 70 years later 524,031 people identified as belonging to the Māori ethnic group. It is nevertheless a little misleading to talk about the growth in the Māori population that occurred between these two periods without addressing changes in definition, survey coverage and collection methods. Moreover, non-demographic processes have undoubtedly played a significant role in the population change.

While, ethnicity is by no means the only characteristic of a population which is affected in this way, and is a general issue in demographic analysis, it does serve to illustrate a fact which lies behind the data: there may or may not have been a significant change in an individual’s world view over time – the responses may be reflecting different things. The important fact is that people who consider themselves to be Māori exhibited certain characteristics in 1926 and by 1996 the characteristics of people who are considered by the wider society as well as the individual respondents to be Māori had altered.

Similar issues apply to people of other ethnicities. However, apart from relatively short interludes in New Zealand's earlier colonial history, these other groups have been a recent phenomenon and are currently undergoing rapid changes in structure and nature. It is for this reason that much of this discussion has focussed on the relationship between people of Māori and European ethnicities, and people of Pacific and Asian ethnicities less central, since the evidence covers a much longer period and this relationship has until now been of higher policy importance. It is apparent from our research that the interaction between ethnicities is volatile and as new boundaries and socio-cultural patterns continue to emerge, an understanding of the nature of this interaction will become increasingly important to social and economic policy issues.

In this context, the uses to which the data is put have changed in ways which are essentially compatible with the changes in the data, so that trends over time in general remain largely valid. However, despite this, recent changes in a rapidly changing demographic, social and political environment have made short-term trends harder to read because of volatility imposed on the data by changing questions in adjacent collections, and the use of different questions and collection methods to collect data for different components of change.

## **7. Conclusion**

The challenge in the future will be to fairly collect and represent data on this growing ethnic diversity at the same time as adequately providing data of relevance to users, in a form which meets their requirements. One of the key elements in this is education of the users of the data, so that they understand what the data represents, and, more importantly, what it does not represent. Diversity is of growing relevance as one of the most important aspects of the way in which ethnicity affects social structures and demographic processes.

However, an equally important issue in the future may be how far diversification can go before the very process of complexification itself becomes self-limiting and a trend starts toward simplification and apparent diversity diminishes. At least some of the diversity observed in the 1996 Census for example may lie in the disquiet people have with not having a satisfactory descriptor to use for the majority ethnicity of New Zealand, an issue which must have a familiar ring to it among many other ex-colonial countries such as Australia, Canada and the U.S.A. (Peterson, 1997). Neither the term "New Zealand European", which many people are uncomfortable with and "Pākehā", which many people find offensive, are seen by respondents to be valid and they opt for alternative European ancestral links. This is by no means an issue unique to New Zealand, of course, but it has been identified as a major factor in this country.

Current rapidly growing ethnic diversity presents numerous challenges to those charged with providing data that adequately meets users needs and which is collected in a way that is culturally acceptable to respondents. Ethnic boundaries have become less distinct. It is now unthinkable to force respondents to identify with only one ethnicity or to assign them to an ethnicity on the basis of biological lineage. Self-identified cultural affiliation is now the norm for collecting ethnic data within New Zealand.

Non-demographic processes, as evidenced by significant movement of individuals into and out-of various ethnic groups, have added a new fluidity to ethnic data over the last few decades. These processes reflect respondents refining their understanding of terms such as ethnicity, ancestry and race, shifts in political climate, changed perceptions of the end use of the data, and possibly even fashion.

By acknowledging and tolerating ambiguity in ethnic response, statisticians, health providers, social commentators and planners are gaining new insights into ethnic populations. In particular, the use of standard questions across statistical collections was a major development, as was the adoption of output classifications that catered for multiple response. The latest ethnic data has dispelled some myths, identified new issues, added new dimensions to the measurement of ethnic differentials in demographic and social phenomenon, and in turn presented new challenges for analysts. The past assumption of simplicity was a “blinkered” approach, which failed to recognise the complexity and multiplicity of ethnic response and in doing so presented an unbalanced, less accurate and less well delineated picture.

Regardless of the ethnic concepts adopted, data based on ethnicity appears to show wide disparities in the wellbeing of New Zealanders. The challenge for demographers is to present this data in a manner that is equitable for people of all ethnicities and which enables progress in the analysis and monitoring of these disparities and assists in the development of strategies to redress these imbalances.

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