The Differences Within, Diversity in Age Structure Between and Within Ethnic Groups

Preface

The Differences Within, Diversity in Age Structure Between and Within Ethnic Groups is a guide to some of the issues that researchers face when dealing with ethnic data. Ethnicity is a variable that is used frequently to look at diversity of outcomes within a population, often as a proxy for disadvantage. It is however, a very complex variable, with profound diversity below the highest level ethnic categories. By taking one single variable, in this case age, and examining how it differs underneath the highest level of the ethnic classification (European, Māori, Pacific peoples, Asian, Middle Eastern, Latin American and African (MELAA) and Other Ethnicity) and in responses to other factors such as birthplace, we are able to understand some of this diversity.

This paper is largely based on information from the 2006 Census of Population and Dwellings, as the census is the chief data collection that allows us to make meaningful exploration of a full range of ethnic categories.

Information in this paper is useful for anyone working with ethnic data, such as medical or social researchers and aims to raise awareness of the dangers of making broad assumptions about ethnic groups. Care should be particularly applied to the Asian and MELAA groups as the data revealed in this paper shows that there is huge diversity beneath the highest level of the ethnic classifications.

This report was written by Rosemary Goodyear.

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Standards and further information

Percentage changes

Percentage movements are, in a number of cases, calculated using data of greater precision than published. This could result in slight variations.

Rounding procedures

On occasion, figures are rounded to the nearest thousand or some other convenient unit. This may result in a total disagreeing slightly with the total of the individual items as shown in tables. Where figures are rounded the unit is in general expressed in words below the table headings, but where space does not allow this the unit may be shown as (000) for thousands, etc.

Prepared by

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1. Challenges of defining ethnicity

Ethnicity is one of the major variables that governments and private researchers use when analysing diversity, particularly equity of access and outcomes, within a population.[1] Statistics NZ lists the main purposes for collecting ethnic data in New Zealand:

- To monitor and report changes and disparities in outcomes among ethnic groups over time.
- To monitor the changing ethnic diversity of New Zealand's population at national, regional and local levels, so that appropriate services may be delivered.
- To estimate future trends through population estimates and projections for Māori, European, Pacific and Asian populations.
- To monitor the demographic, social and economic progress of, and outcomes for, ethnic groups.
- To evaluate the impact of central and local government policies on the economic and social well-being of ethnic groups.
- To model the impacts and costs of policy changes, and to forecast expenditure on services for particular groups.
- To assist in the delivery of services in a culturally appropriate way and to plan social services which meet the special needs of ethnic groups.
- To identify significant communities of interest for liaison and development purposes.[2]

> Once the monochromatic capital of the mainland, Christchurch's suburbs are now filling with the vibrancy of more than 160 racial groups. These new Cantabrians have brought with them experiences, culture, food, traditions and languages as varied as the shades of their skin. The kaleidoscopic effect of their presence in this city has been felt by everyone.
>
> – The Press, Saturday, 23 December 2006, Ethnic enrichment of Christchurch, Diverse City.

Ethnic divergence in outcomes forms the basis of debate and policy initiatives locally[3] as well as internationally. In New Zealand, the contract between Māori and the Crown has also resulted in both an obligation and a need to monitor the situation of Māori; although the government also monitors the situation of other ethnic groups, particularly Pacific peoples.

The job of a statistical agency is to define ethnicity in order to provide measurable categories that can service the needs of official agencies to collect data "which helps them to understand populations, trends in population characteristics and experiences across subgroups of the population including ethnic (or in US terms, racial) groups".[4] Yet ethnicity is one of the hardest concepts to define and consequently definitions have shifted over time to suit the cultural and

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[1] Not all countries collect ethnic data. Some countries, such as European countries that are influenced by the legacy of World War II, continue to refuse to collect statistics on ethnicity or on ethnic groups.

[2] Statistics New Zealand, "Ethnicity classification". http://www.stats.govt.nz/statistical-methods/classifications-and-related-statistical-standards/ethnicity/default.htm

[3] For example: 'Māori criminals should have their sentences assessed against their ethnic and cultural backgrounds, a United Nations report says. . . . Māori Party co-leader Pita Sharples welcomed the report and said Māori were often the victims of "cultural ignorance" within the criminal justice system. The report said Māori were over-represented in prisoner statistics and that provisions in the Criminal Justice Act, allowing people to provide "cultural" reasons for their offending, were underutilised. "Courts ignoring ethnic factors." B Fawkes, *The Dominion Post*, Monday, 20 August 2007

[4] J Burton, A Nandi, Lucinda Platt, "Who are the UK's minority ethnic groups? Issues of identification and measurement in a longitudinal study", Institute for Social and Economic Research, No.2008-26, September 2008, 8.

policy contexts of society. There is also inconsistency in measurement between countries. A tension exists between the official desire for categorisation and the shifting nature of ethnic identification. UK researchers note that one of the key problems of categorical ethnic identities is that these are used to "measure a multidimensional and fluid concept as if it were a uni-dimensional, fixed and stable concept".[5] Measuring and analysing ethnic diversity is therefore a complex and challenging task especially since the concept of ethnicity incorporates other related topics. Indigeneity and cultural and religious difference, birthplace, language, and visible difference (which is one mechanism whereby members of an ethnic group can be identified by a combination of physical features including skin colour) are related to, or form part of ethnicity. [6]

This paper provides a context for ethnic analysis in New Zealand by exploring the diversity that exists within the high level groupings that are most commonly used for ethnic analysis: European, Māori, Pacific peoples, Asian, Middle Eastern, African and Latin American (hereafter MELAA) and Other as well as an examination of multiple ethnicity.

Age structure is one of the most important demographic elements of a population and visualising variability in age structure shows how analysing data at the highest level can obscure important differences. This variability in age structure may be shaped by a number of factors: fertility rates, the proportion of migrants in a given ethnic population, and the timing and circumstances surrounding migration. Any analysis or policy formation needs to be aware of these subtleties. Supporting evidence for this paper will be derived from the 2006 Census of Population and Dwellings because of the size of the data set, which allows the disaggregation of broad level ethnic groupings into lower level ethnic groupings.

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[5]J Burton, A Nandi, Lucinda Platt, 8.

[6] Boston, J., Callister, P., & Wolf, A. (2006). The Policy Implications of Diversity. Institute of Policy Studies: Wellington, NZ.

2. Ethnicity within New Zealand

History

An interest in ethnic measurement emerged in New Zealand even before the beginnings of official government. Initially, the emphasis was on population counts. In 1769, Captain James Cook made a rough enumeration of the number of inhabitants in Aotearoa (estimating approximately 100,000 Māori) while early missionaries as well as the official British resident, James Busby, attempted to calculate the numbers of European and Māori.[7] By the late 19th century, concerns about depopulation gave the New Zealand government an interest in quantifying the number of Māori in New Zealand. By the 20th century fears of 'alien' races resulted in an attempt to define the number of other non-Europeans. Official classifications at this time firmly focused on 'race' and 'degrees of blood'.[8]

In 1921, the Department of Statistics instructed numerators to classify people of mixed race thus: "Those who ranged in degree between half-caste and Māori were to be included with Māoris of full blood", while those between European and half caste would be classed as "half caste". The definition included some aspects of cultural identity. Whether half castes came under the Māori or the general census depended on whether they lived as European or Māori. Any issue (child/ren) of a Māori and a 'race alien' were classed as a 'race alien'.[9]

This concern with determining degrees of difference dominated enumeration for much of the 20th century. In the 1970s the collection of ethnic data changed again and emphasis gradually changed from blood to identification. The 1971 Census asked 'descent origin' and in 1976 the term changed to 'ethnic origin'. The 1986 Census allowed people to list multiple affiliation rather than fractions of affiliation. By 2001 the Census asked people "Which ethnic group do you belong to? (Mark the space or spaces which apply to you?)".[10]

Current definition

The current Official Statistics Ethnicity Standard, (Statistics NZ, 2005), defines ethnicity as the ethnic group or groups that people identify with or feel they belong to. New Zealand is often seen as unique in the way that it approaches the concept of ethnicity, both in the conceptualisation of ethnicity, and in the collection of ethnicity data. Ethnicity is a concept quite separate and distinct from race, ancestry, nationality, or citizenship although it can incorporate elements of these concepts. There is an underlying assumption that an ethnic group is a group because of a shared similarity and is more about cultural affiliation than a race-based concept. Indeed, in defining ethnicity, the Ethnicity Standard explains an ethnic group is made up of people who have some or all of the following characteristics:

- a common proper name
- one or more elements of common culture which need not be specified, but may include religion, customs, or language

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[7] The Rev W. Williams estimated that in 1838 the North Island's total Māori population was about 106,000, Alexander Busby, the Official British Resident thought that there were about 2,000 to 3,000 Europeans in 1840. A Grey, *Aotearoa and New Zealand A historical geography*, Canterbury University Press, Christchurch 1994, 145-146.

[8] S Howard and R Didham, "Ethnic intermarriage and ethnic transference", 2.

[9] Department of Statistics, *Results of a Census of the Dominion of New Zealand taken for the night of the 17th April, 1921, General Report*, Wellington 1925, 65. Information about race aliens first appeared in the 1916 Census. The 1936 census defined race alien as "all those who are of neither European nor Māori origin. Substantially (though not wholly, as noted in the remarks on "white" population) it relates to the "coloured" races other than the native Māori race." Census and Statistics Department, *Population Census, 1936, Vol.IX-Race*, Wellington, New Zealand, 1945, i.

[10] S Howard and R Didham, "Ethnic intermarriage and ethnic transference", 2.

- a unique community of interests, feelings and actions
- a shared sense of common origins or ancestry, and
- a common geographic origin.

People in the census can choose up to six ethnic groups although in practice most people affiliate with one or two. In the 2006 Census, less than two percent of the population listed three or more ethnic affiliations. There is some variation in other official collections but increasingly other agencies are attempting to harmonise the collection of ethnicity in order to increase the comparability of ethnic data.

Level one ethnic categories

As detailed in the Ethnicity Standard (Statistics NZ, 2005), six high level (level 1) ethnic groups are used when summarising data.[11] The six high level ethnic groupings in order of their population size are European, Māori, Other ethnicity, Asian, Pacific peoples and MELAA. In 2006, the 'Other ethnicity' group consisted largely of people who responded as New Zealander, as shown by the following graph. The 2005 standard is currently being reviewed in regard to placement of New Zealander responses.

Figure 1

Ethnic Group as a Percentage of the Total Population [1]
2001 and 2006 Censuses
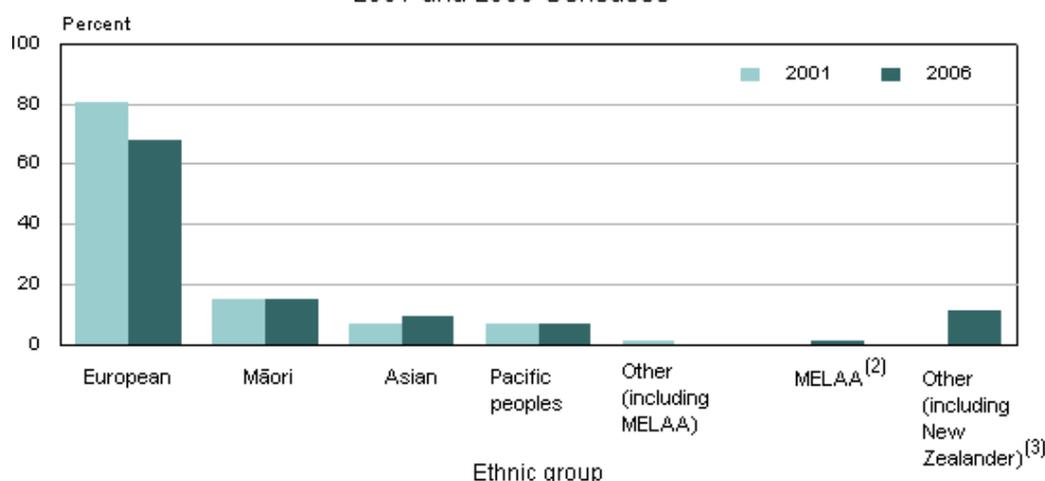
(1) People were able to identify with more than one ethnic group, therefore percentages do not add up to 100.
(2) MELAA, or Middle Eastern, Latin American and African, was introduced as a new category for the 2006 Census. Previously, 'MELAA' responses were allocated to the 'Other ethnicity' category.
(3) 'New Zealander' was introduced as a new response option for the 2006 Census. 'New Zealander' responses form part of the 'Other ethnicity' category. For 2006, 'New Zealander' responses had the largest contribution towards the 'Other ethnicity' category. For 2001, and previous censuses, 'New Zealander' was counted with the 'European' category.

These groupings can be further disaggregated into level 2, level 3 and level 4 categories, with over 200 ethnic categories at the most detailed level of the classification. The following diagram illustrates how level 1 and level 2 categories fit together.

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[11] While the Asian ethnic group used to be aggregated with other ethnicities into a residual 'Other' grouping, and is, in some small survey situations, still grouped in the 'Other' ethnic group, over time the number of people identifying with ethnicities in the Asian ethnic grouping has increased and is generally now identified separately.

Figure 2

Hierarchy of level 1 and level 2 ethnic groups[12]

1 European	10	European nfd
	11	New Zealand European
	12	Other European
2 Māori	21	Māori
3 Pacific Peoples	30	Pacific Peoples nfd
	31	Samoan
	32	Cook Islands Maori
	33	Tongan
	34	Niuean
	35	Tokelauan
	36	Fijian
	37	Other Pacific Peoples
4 Asian	40	Asian nfd
	41	Southeast Asian
	42	Chinese
	43	Indian
	44	Other Asian
5 Middle Eastern/Latin American/African	51	Middle Eastern
	52	Latin American
	53	African
6 Other Ethnicity	61	Other Ethnicity
9 Residual Categories	94	Don't Know
	95	Refused to Answer
	96	Repeated Value
	97	Response Unidentifiable
	98	Response Outside Scope
	99	Not Stated

Note: the other ethnicity category is largely made up of the New Zealander response. See Statistics NZ, *Profile of New Zealander Responses, Ethnicity Question: 2006 Census f*or more details.

Statistics NZ consulted extensively with data users when developing high level aggregations of people's responses[13] and priority is given to meeting information needs of the majority of users. As researchers Didham, Callister and Kivi noted in their 2008 paper, these groupings do not always reflect individual preferences as people do not choose to be reclassified into these higher groups and this reclassification involves certain assumptions. All the higher level groups, except for Māori, are not individual ethnic groups but collections of groups, an example being Pacific peoples. "Therefore, they are not strictly 'who we are', but are who statistical agencies group us with. For some people, it is not a grouping they would naturally choose."[14] High level categories

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[12] http://www.stats.govt.nz/statistical-methods/classifications-and-related-statistical-standards/ethnicity/download+of+classification.htm

[13] See information about the Review of Ethnicity, http://www.stats.govt.nz/analytical-reports/review-measurement-ethnicity/default.htm.

[14] P Callister, R Didham, A Kivi, "Who are we? The conceptualisation and expression of ethnicity", 22.

also exist because of statistical requirements such as confidentiality and the risks of data being skewed by small numbers. Indeed, in many sample surveys numbers are too small for information to be released about all the six high level groupings. Such groupings allow for easier analysis and output but also reduce the complexity and multiplicity of ethnic responses and obscure important ethnic differences.

Māori also affiliate with specific iwi or tribal groupings that have their own distinct traditions and histories, meaning that the generic Māori grouping can be further disaggregated. In 2006, there were 643,977 people in New Zealand who said that they were of Māori descent, and 522,576 or approximately 81 percent of these people said they identified with the Māori ethnic group. The largest iwi for people of Māori descent was Ngāpuhi with 122,211 people, while a total of 102,366 people of Māori descent did not know their iwi.

The six highest level ethnic groupings appear logical on a superficial level but should not be viewed as homogenous. Certainly they appear to share at the broadest level a crude geographical origin; although it is recognised that for Pacific and Asian peoples the geographical origin is very extensive and involves a diverse range of cultures and peoples.

In the case of Asian peoples, the geographic boundaries implied by ethnicities included in the group are open to dispute. Moreover there can be no implication, on geographic grounds, of homogeneity within the group, given the ethno-cultural and historical diversity of the region.

The MELAA group includes ethnicities that originate from non-contiguous parts of the world, and is really a way to identify the groups included previously under the 'Other' category. Any discussion of the diverse range of groups, identities and languages within Asian, MELAA and to some extent Pacific peoples, makes their heterogeneity obvious and exposes the problems of making assumptions based simply on these broader level groupings. An examination of the dynamics of the growing number of people with multiple ethnic identities further exposes the complexities inherent in ethnic analysis.

Some issues in understanding ethnicity

Understanding multiple responses

Although ethnicity is a complex topic, the presence of people affiliating with more than one ethnicity further complicates any ethnic analysis. Indeed until recently, people who gave multiple ethnicities were allocated to one group, with a hierarchical prioritisation system that was essentially based on perceived policy needs. As the level of multiple responses increased, however, researchers such as Didham (2006) showed that prioritisation became increasingly problematic. At the time of the 2001 Census some groups with high levels of multiple responses lost large numbers of people, for example, almost a third of Pacific children were counted as Māori under the prioritised system.[15]   Statistics NZ discontinued prioritisation after the *2004 Review of the Measurement of Ethnicity Statistics.*

While some statistical collections do not allow people to identify with more than one ethnicity, New Zealand recognised that multiple ethnic responses are essential as many people cannot simply respond with one ethnicity without denying part of their identity. This definition is consistent with, for example, how ethnicity is conceptualised within Māoridom whereby "individuals with mixed Māori background regardless of their ethnic heritage are considered 'Māori' without denying any other ethnic heritage they might have."[16]   It is important to remember that ethnic groups are not necessarily independent and have a lot of overlap between them.

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[15] "Under this system Māori had priority coding, followed by Pacific peoples, then Asian, then other ethnic groups besides European, followed by "Other European" and, finally New Zealand European. P Callister, R Didham, A Kivi, "Who are we? The conceptualisation and expression of ethnicity", 26 See also R Didham, 'Impact of Prioritisation on the Interpretation of Ethnicity Data', Statistics New Zealand 2006.

[16] Howard and Didham.

Understanding that overlap, and the fluidity of ethnic grouping is the first key to understanding the diversity that exists within, and indeed between, different ethnic groups.

Table 1 gives the proportion of each level 2 ethnic group that affiliate with multiple ethnicities. This information reveals the extent of the overlap between ethnic groups at this level of analysis and gives the denominator for each ethnic group.

Table 1

Single and Multiple Ethnic Group Affiliations, Level Two Ethnic Groupings

Level One grouping	Level Two grouping	Population	Counts		Proportion	
			Single ethnicity	Multiple ethnicity	Single ethnicity	Multiple ethnicity
European						
	European nfd	21,855	19,230	2,625	88	12
	New Zealand European	2,381,076	2,062,635	318,441	87	13
	Other European	239,892	181,806	58,083	76	24
Māori	Māori	565,329	298,395	266,934	53	47
Pacific Peoples						
	Pacific peoples nfd	786	498	288	63	37
	Samoan	131,103	86,763	44,337	66	34
	Cook Islands Maori	58,011	30,759	27,255	53	47
	Tongan	50,478	35,601	14,877	71	30
	Niuean	22,476	9,177	13,296	41	59
	Tokelauan	6,822	2,958	3,864	43	57
	Fijian	9,864	4,752	5,109	48	52
	Other Pacific peoples	8,118	4,368	3,747	54	46
Asian						
	Asian nfd	2,160	1,662	498	77	23
	Southeast Asian	43,959	36,897	7,065	84	16
	Chinese	147,570	130,551	17,016	89	12
	Indian	104,583	95,097	9,483	91	9
	Other Asian	59,736	55,398	4,338	93	7
MELAA						
	Middle Eastern	17,514	14,652	2,862	84	16
	Latin American	6,657	5,094	1,563	77	24
	African	10,647	8,586	2,061	81	19
Other Ethnicity	Other Ethnicity	430,878	374,847	56,031	87	13

Note: nfd includes people who said they affiliated with an ethnicity at level one but did not provide enough detail to be included at the more detailed level of the classification.

Approximately, one in eight people at the time of the 2006 Census affiliated with more than one ethnic group. For some ethnic groups, however, a much greater proportion of people identified with multiple ethnicities.

A range of factors may influence the degree to which ethnic populations may record higher degrees of multiple ethnicities. These factors may include the size of the ethnic population, the degree that intermarriage/partnership occurs and is acceptable, as well as the acceptability itself of having multiple affiliations.

Ethnic intermarriage and ethnic mobility

A paper on ethnic intermarriage in New Zealand suggests that age, education and whether a person was born in New Zealand influence rates of intermarriage.[17] Ethnic mobility (where people change ethnic affiliations) and ethnogenesis (the formation or emergence of an ethnic group within a larger community) further increase the likelihood of people identifying with multiple ethnicities.

Shifts in ethnic identification may occur over time and in different contexts. For example, the number of people identifying with Māori ethnicity increased from the 1960s not just as a result of natural increase but also through ethnic mobility as the perceived acceptability of being Māori increased. In 2007, researcher Andrew Sporle, told the New Zealand Herald "the number of people claiming Māori ethnicity had jumped in the past decade because of 'what we call the Shortland Street or Dr Ropata effect'. It suddenly became really cool to be Māori."[18]

The semantic meaning of ethnic terms themselves change, as researchers into ethnogenesis has shown.[19] A recent study of young New Zealanders found that they changed their expression of cultural identity according to the situation, which could be seen as "a positive response to our post-modern, conflictual world, which regularly demands multiple responses to differing values and belief systems."[20] These trends, combined with continuing migration to New Zealand from a diverse range of counties, result in increasing numbers of inter-ethnic marriages and younger generations with potential multiple affiliations.

Size of the ethnic group

The size of the ethnic group is important. Statistically, smaller populations have fewer people to contribute to variation and thus would generally be expected to show less within group difference. However, with lower population denominators, small differences become magnified when converting counts to proportions. Furthermore, the smaller the ethnic group, the more likely they will interact with people outside their group. The more interaction they have outside of their ethnic group the higher the likelihood of ethnic intermarriages, cross-ethnic group mixing and identification, and rearing children who identify with mixed ethnicities. Of course the existence of multiple ethnicities itself will magnify the statistical incidence of ethnic intermarriage.[21] As shown in table 1, the highest overlap can be seen in some of the smallest populations; some of the Pacific ethnic groups who had migrated to New Zealand in waves from the 1960s onwards. Of the larger populations, the Māori ethnic group shows the largest degree of ethnic group overlap, where nearly half the Māori population affiliate with another ethnicity that is not Māori. As noted by Howard and Didham, New Zealand has had a long history of ethnic intermarriage, particularly between Māori and European from the earliest days of contact.[22] The lowest rate of multiple affiliation comes from the 'other Asian' group, which includes Sri Lankan, Japanese, Korean, Afghani, Bangladeshi, Nepalese, Pakistani, Tibetan, Eurasian, and Asians not elsewhere classified.

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[17] P Callister, R Didham and D Potter, "Ethnic Intermarriage in New Zealand," Statistics New Zealand Working Paper, Sept 2005, 5.

[18] "Ethnogenesis refers to the birthing of new cultural identities" and Voss explores these ideas by studying the rise of a new identity among colonial settlers in San Francisco while it was still under Spanish rule. She examines how these settlers forged a new identity as Californians which was separate from their ethnic ancestry. B Voss, *The Archaeology of Ethnogenesis. Race and Sexuality in Colonial San Francisco*, University of California Press, CA, 2008.

[19] *NZPA* | Friday, 07 December 2007, http://stuff.co.nz/4315628a8153.html.

[20] E Keddell, "Cultural Identity and the Children, Young Persons, and Their Families Act 1989: Ideology, Policy and Practice', *Social Policy Journal of New Zealand*, 32 Nov 2007, 52-53.

[21] Callister, Didham and Potter, 5.

[22] See Howard and Didham.

Commonality does not imply homogeneity

Other issues that should be allowed for when carrying out ethnic analysis is that while commonality is an important part of defining ethnicity, sharing some commonality does not imply homogeneity. In effect there is no one ethnic experience but a multiplicity of experience as social class and geographical location, among other factors, are also important determinants of experience. For example, a 2003 report of the educational attainment of children noted that although most outcome studies revealed that Māori and Pacific students achieve "significantly below the overall New Zealand mean for many curricula areas, and in many cases below international mean achievement levels". There is:

marked variation within Māori and within Pasifika achievement, with some of these children achieving very highly, on average. . . . caution is required when considering the findings of research, because the usual ethnic groupings of 'Māori' and 'Pasifika' (and probably Asian) children in New Zealand research studies obscure the fact that, while there are commonalities within these broad groupings, they are not homogeneous groups. There are diverse ethnic groups within Māoridom (Adams, Clark, Codd, O'Neill, Openshaw, & Waitere-Ang, 2000) and Pasifika people (Coxon, Anae, Mara, Wendt-Samu & Finau, 2002; Mara, 1998.[23]

Māori and Pacific peoples are not discrete groupings but share a significant proportion of their population with each other. Groups can be made up of different and distinct parts and ethnic groups are no exception. An examination of age structure within level 1 ethnic groups reveals some of that diversity of experience.

An exploration of diversity: Age differences between and within ethnic groups

Age structure is one of the most well-known sources of between-group differences and is often used in ethnic analysis. Age standardisation of data is a common analytical practice because age differences can influence many of the characteristics in small populations, particularly of ethnic groups. It may particularly affect outcome variables such as income and education.

Age structure is not constant and can vary markedly over time. For example, the age and sex structure of New Zealand and its component ethnic groups changed dramatically over the years between the 19th century and 2006. In the period of the gold rushes, for example, the rapid inrush of men led to a strong male/female imbalance in the population. The birth-rate in the late 19th century, which approximated to over six children per woman, meant that early 20th century New Zealand was a very youthful place.[24] By the early 21st century, population ageing (at least among the majority New Zealand European population) had resulted in a very different age structure.

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[23] F Biddulph, J Biddulph & C Biddulph, "The complexity of community and family influences on children's achievement in New Zealand: Best Evidence Synthesis", Report prepared for the New Zealand Ministry of Education, Jan 2003, 48.

[24] I Pool, A Dharmalingam & J Sceats, The New Zealand Family from 1840: A Demographic Study, AUP, Auckland, 2007. www.auckland.ac.nz/uoa/aup/book/2007/the-new-zealand-family.cfm
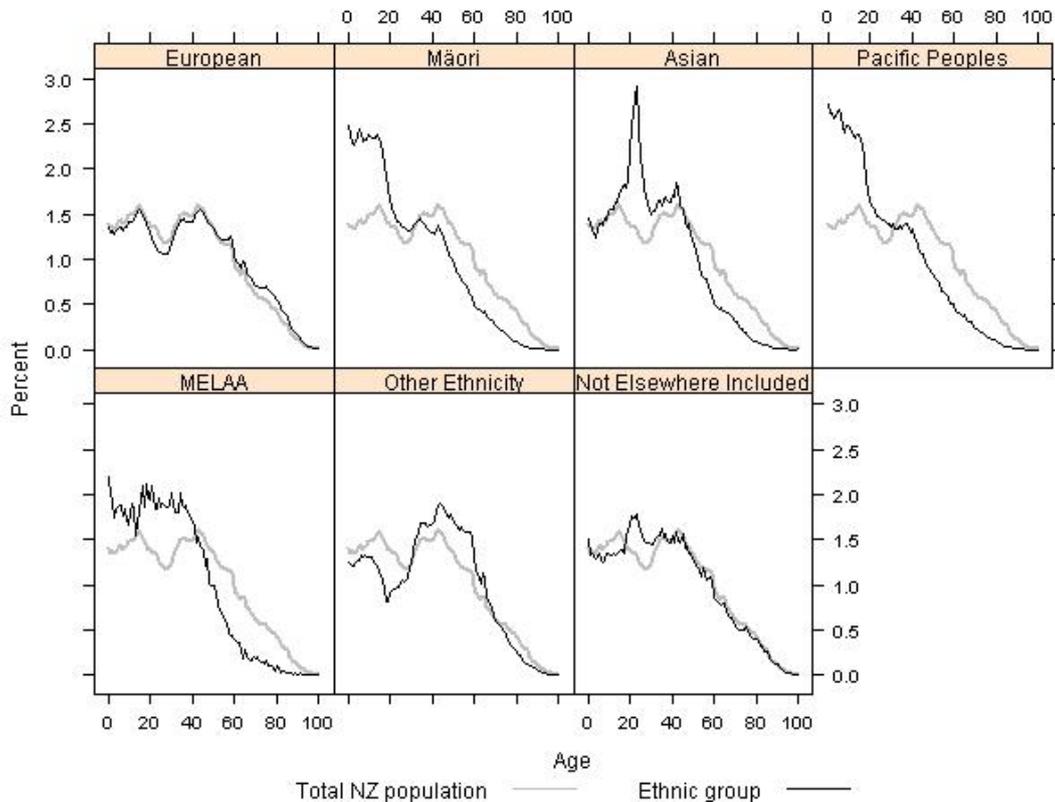
Figure 3

Age and Sex Structure of New Zealand Population, 1906 and 2006 Census
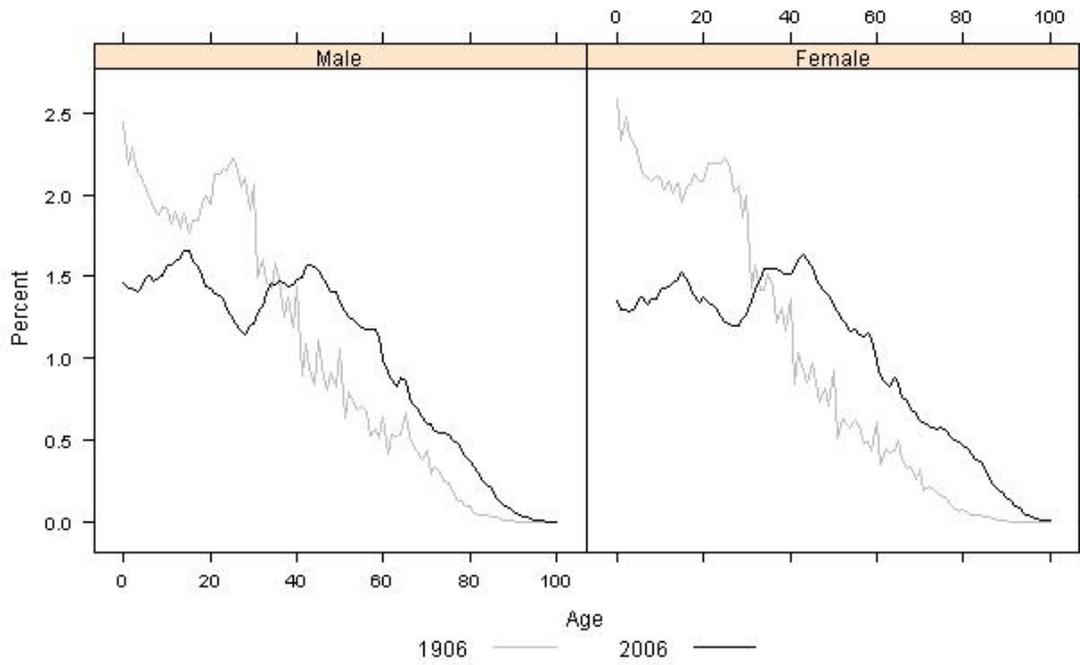
Note: The New Zealand population in 1906 did not include Māori, who were enumerated separately.

Figure 4

Ethnicity (level 1) and Age Structure, 2006 Census

Other response largely consists of New Zealander.

Note: Not elsewhere included, is a residual category that includes non-response, illegible responses, objection to answer, and responses that are out of scope of the question. Information about residuals has been included to establish patterns for non-response. It is interesting to note that the note elsewhere included age pattern is very close to the European group, with a spike in the 20-40 age group, where the European response dips.

Figure 4 shows distinctive age structures at the level 1 ethnic group. Māori and Pacific peoples have high proportions of children but perhaps the most distinctive pattern emerges among the Asian grouping with its sharp peak in people aged 20–24.

A further examination of the Asian category at level 2, however, shows that the level 1 graph mainly reflects the age pattern of people affiliating with the Chinese ethnic group, who are the largest group within the Asian category. In contrast, people affiliating as Indian, the next largest Asian grouping, have a much flatter age structure with the highest proportion of people aged between the mid 20s to early 40s.

Figure 5

**Ethnicity and Age Structure for Asian Ethnic Groups (level 2), 2006 Census**
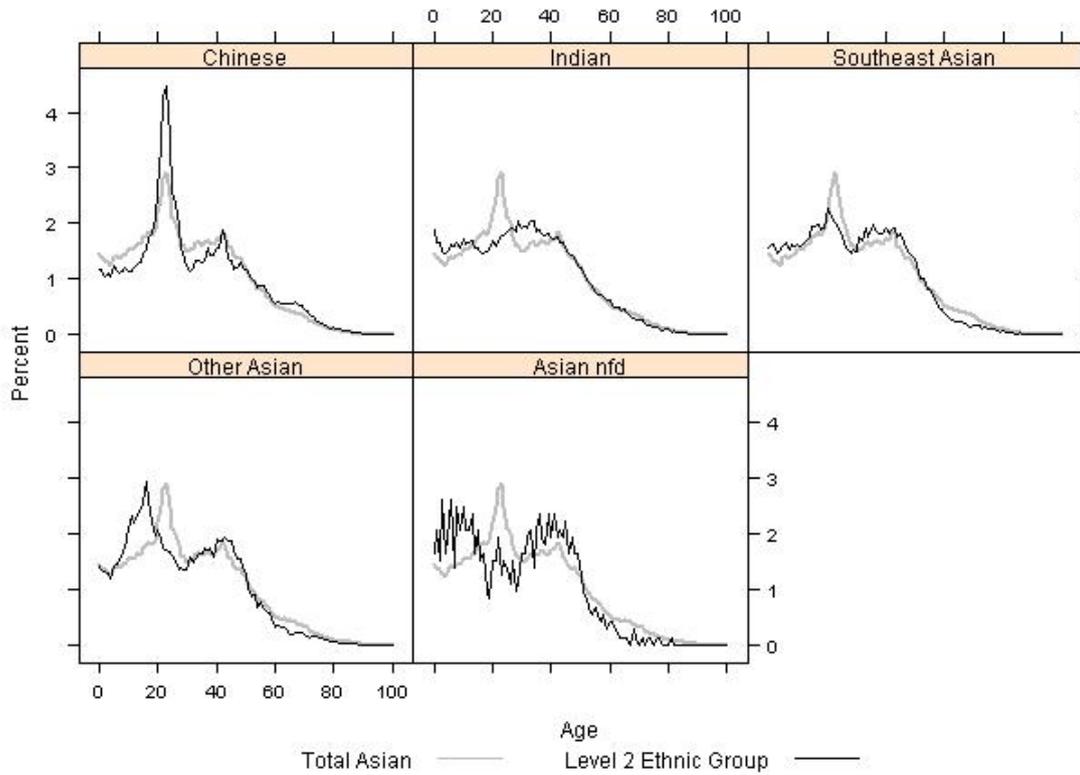
Note: even level 2 categories include a diverse range of ethnic groups. For example Southeast Asian is made up of groups such as Thai, Cambodian, Burmese and Filipino.

Age structures for the European grouping are even more skewed. Figure 5 shows that people affiliating with the New Zealand European ethnic group, the majority of the New Zealand population, make up 90 percent of the European population. This numerical dominance means that the European age structure clearly reflects the age structure of the New Zealand European population. Level 1 age structure is being driven by the dominant level 2 ethnic grouping.

Figure 6

**Ethnicity and Age Structure for European Ethnic Groups (level 2), 2006 Census**
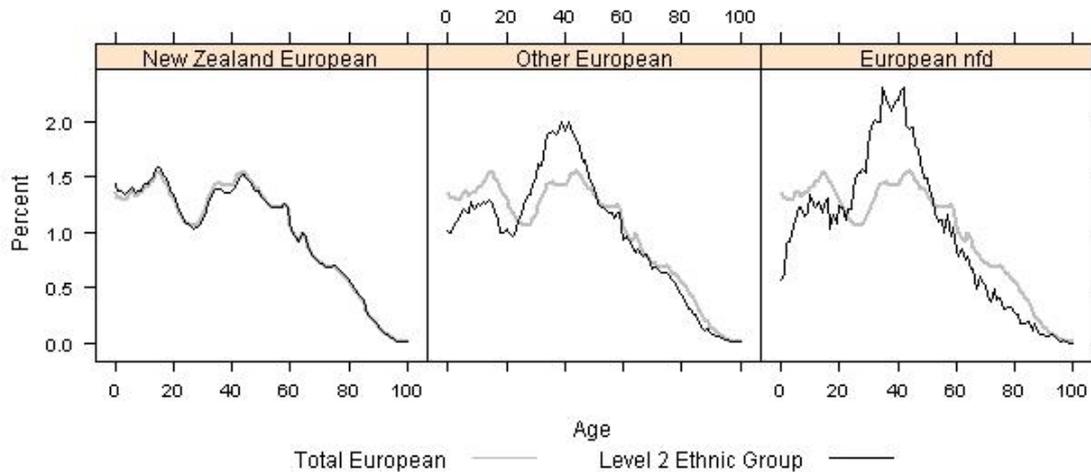
Note: Other European is also a very diverse grouping, consisting of over 60 different ethnic groups including English, Irish, Polish and South Slavs.

The MELAA grouping is a combination of geographically and culturally disparate groups. Figure 7 demonstrates this diversity in age structure. Middle Eastern is the largest group in this category, making up approximately 50 percent of the total MELAA grouping and is itself a diverse collection of groups including Turks, Iranians, Egyptians and Israelis. The MELAA total bears little resemblance to any of the three age structures within this grouping.

Any analysis of the age structure of these groups at level 1 therefore will yield little useful information about the component groups within this category. Caution should therefore be applied when using this group for any analysis relating to ethnic disparity.

Figure 7

Ethnicity and Age Structure for MELAA Ethnic Groups (level 2), 2006 Census
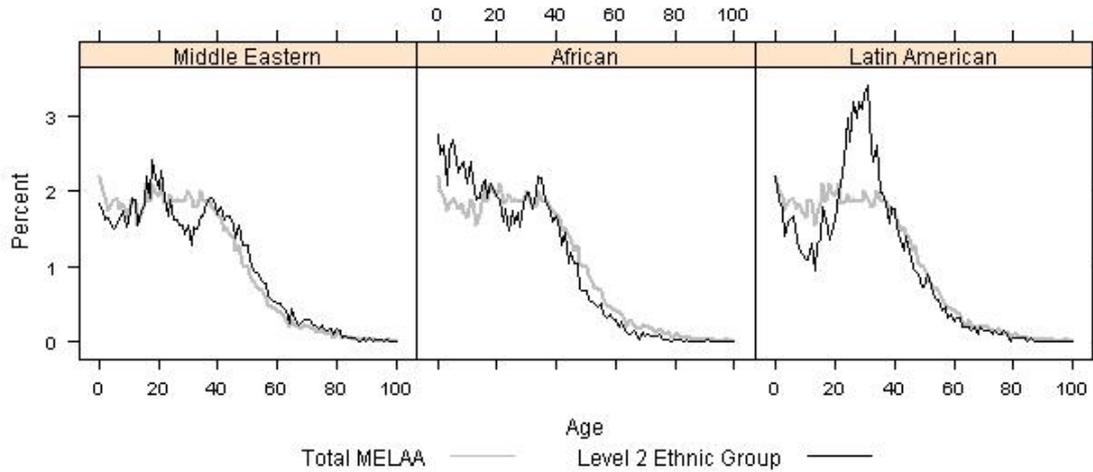
Pacific peoples is the only grouping that shows a level of homogeneity in age structure, see figure 8. Although almost half (49 percent) are people affiliating with the Samoan ethnic group, this does not disproportionately skew the age structure as the other Pacific groupings at this level show very similar characteristics. There are small variations: people with Tongan ethnicity had the highest proportion of infants and young children while people with Fijian ethnicity had the lowest proportion. All the Pacific groupings have the most youthful age structure of any ethnic grouping and share a strong similarity in age structure with Māori.

Figure 8

Ethnicity and Age structure for Pacific Ethnic Groups (level 2), 2006 Census
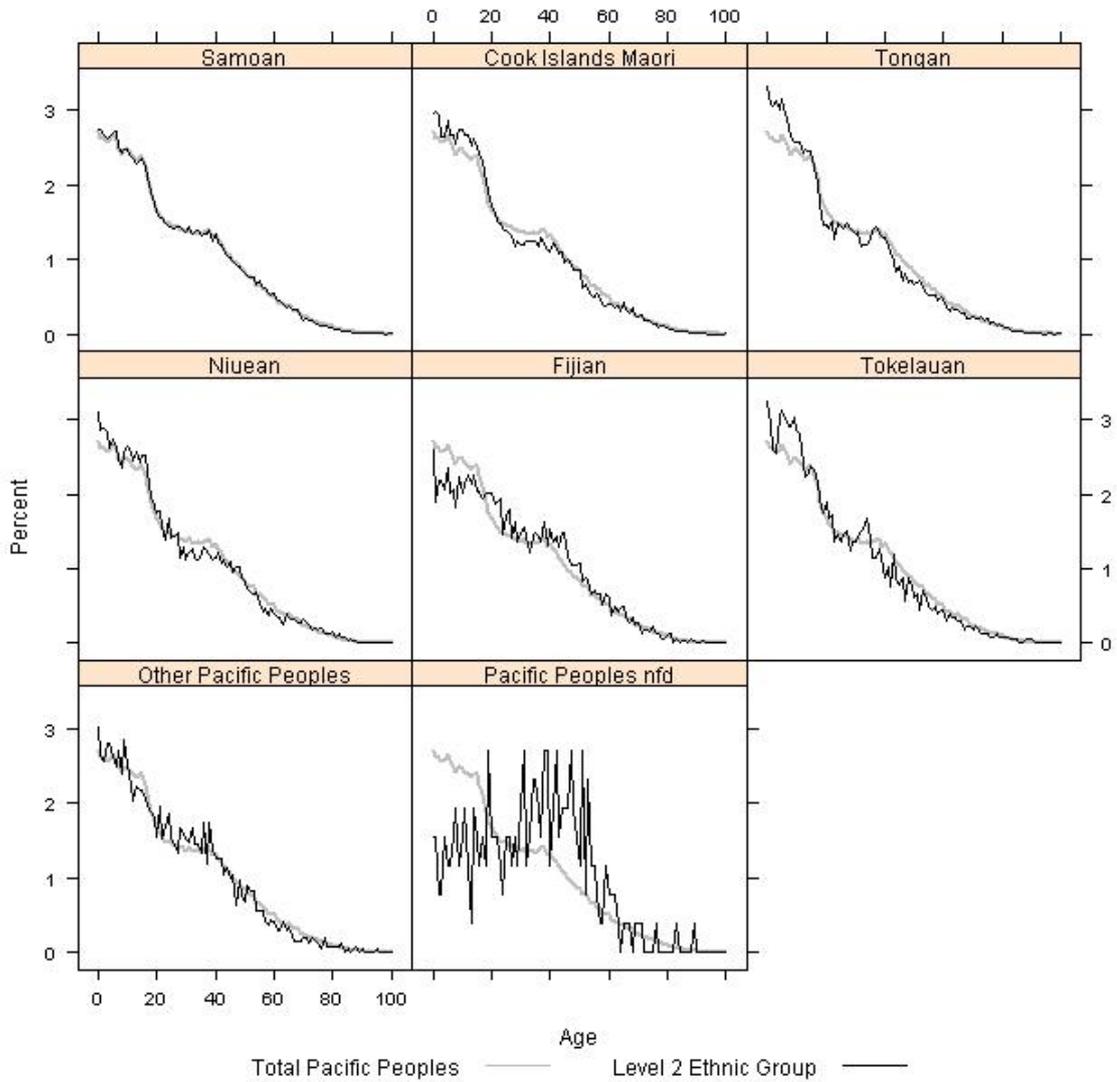
Note: the very small numbers in the Pacific Peoples nfd category results in erratic age patterns.

nfd= not further defined

The age distributions shown in figures 3 to 8 reveal the diversity of age structure for peoples grouped below level 1 ethnic categories. Issues, problems and experiences will not be uniform for this range of groups.

Another source of diversity: People born overseas compared with born in New Zealand

Another dimension that complicates the issue further within ethnic categories is the variation between the overseas born and New Zealand born population. This variation is especially important for groups when there have been two or more distinctive waves of migration to New Zealand. These groups include people with Chinese, Indian and Lebanese origin.

This variation is particularly evident in the Chinese population, which is the largest group numerically in the Asian category. Chinese arrived at the time of the goldrushes but government restrictions made ongoing immigration from China difficult with the imposition of a poll tax. The 1899 Immigration Restriction Act directed that no person other than those of British or Irish birth and parentage would be allowed to land in New Zealand unless they wrote and signed an application in a European language. Over subsequent years this policy limited immigration from outside these countries.[25] In 1974 the government ended unrestricted immigration from United Kingdom and Ireland and provided for the selection of immigrants from all sources on the same criteria.[26] Changes to legislation policies in subsequent years led to an increase in people of different ethnicities and nationalities settling in New Zealand with a subsequent rise in a number of groups particularly from Asia. New Zealand also took advantage of its English speaking status and promoted the development of English language schools and the education of overseas students. As the work of Manying Ip has revealed, these resulted in a collection of very different population who would be included as Chinese. She notes that New Zealand born Chinese whose families have been in New Zealand for generations have a very different experience to more recent business migrants and the large student population.[27]

The following figures show a clear contrast between the age structures of New Zealand born and overseas born Chinese, as discussed in the work of Manying Ip. The sharp peak that characterises the Asian and Chinese age structures occurs only in the overseas-born Chinese population. Since the overseas-born Chinese made up almost 80 percent of the Chinese population in 2006, any variation in the New Zealand born population is disguised.

Many people with Chinese ethnicity who were aged 20–24 years were students: 74 percent of Chinese people aged 20–24 said that they studied either full or part-time. In total, 46,146 people or 40 percent of Chinese adults who specified their studying status said that they studied either full or part time. The high proportion of students in the 20–24 group adds volatility to the age structure of people with Chinese ethnicity.[28]

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[25] *New Zealand 1990 Official Yearbook*, Wellington, 1990, 188. New Zealand has also accepted refugees since the early 20th century. Numbers increased in the 1970s when refugees who came under the United Nations mandate settled in New Zealand, ibid 190.

[26] ibid 144.

[27] Ip, M, (ed) *Unfolding History, Evolving Identity The Chinese in New Zealand*, AUP, Auckland 2003. Ip, M, New Zealand's New Chinese Communities: Diversity and Mobility, A paper presented to the 'Sub Ethnicity in the Chinese Diaspora Conference', University of Toronto, 12-13 Sept 2003.

[28] Chinese is itself a grouping of ethnicities and so the term itself implies diversity rather than homogeneity. Wikipedia defines Chinese people, as people of Chinese ethnicity and/or nationality with Zhonghua minzu, the term for the supra-ethnic Chinese nationality which relates to the modern notion of a Chinese nationality transcending ethnic divisions, with a central identity to China as a whole. It includes peoples who have historically interacted, contributed and assimilated to various extents with Chinese civilization. Han Chinese is a common descriptor for a grouping of ethnicities incorporating around 90 percent of the population in China but there are also a significant group of ethnic minorities in China (China officially recognises 55 minorities, many of which are not Chinese ethnically and would not generally report themselves as Chinese), who comprise the non-Han Chinese population in mainland China and Taiwan.

Figure 9

Age Structure for Selected Ethnic Groups (level 2), by Overseas born/New Zealand born, 2006 Census
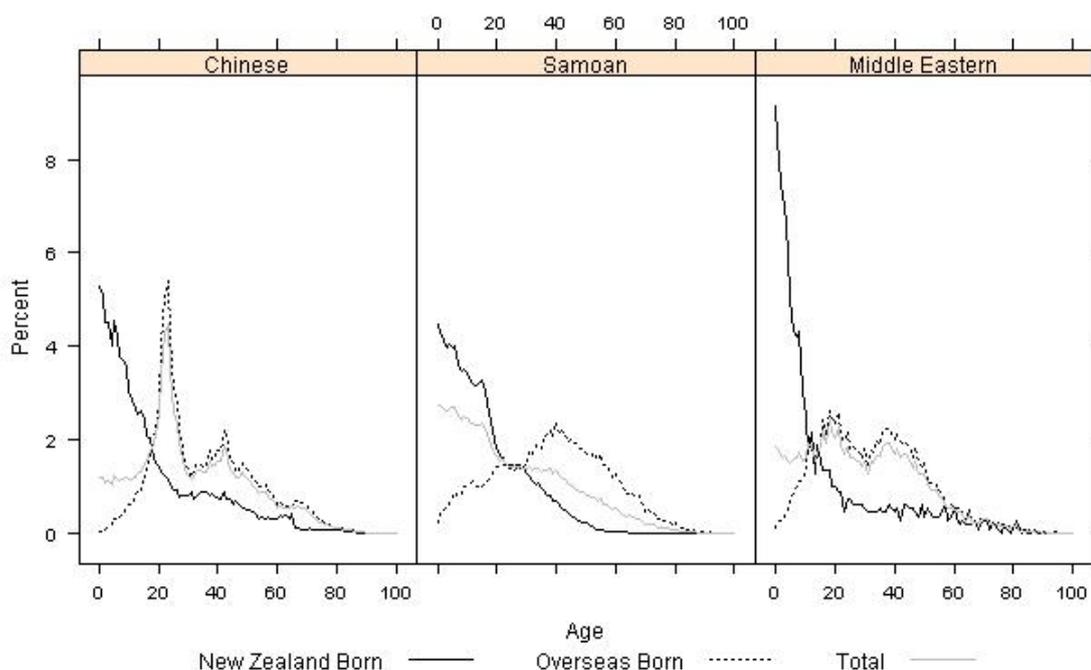
While the contrast between New Zealand-born Samoan and overseas-born people affiliating with the Samoan ethnic group is not quite as striking, there is still a clear contrast between the two groups.

In Figure 9 the peak ages for Samoan overseas-born are between the late 30s and late 50s, reflecting the peak migration periods for Samoan immigrants in the 1960s and early 1970s. The effects of migration show very clearly in these graphs: young children dominate the New Zealand population in groups of fairly recent migrants, particularly in the Middle Eastern group.

Single and combination ethnic groups

Another source of complexity within and between ethnic groups comes when groups have high percentages of multiple ethnicities, particularly Māori and Pacific peoples. An examination of ethnic combinations, using level 1 ethnicity reveals that single and combination groups can have very differing age structures.

There has been an increasing incidence of multiple ethnicity among young people, which results in the proportion of young children with a sole ethnicity declining, bringing further complexity into any policy formation. Figure 10 shows these effects for selected groups. The very high proportion of young children with Māori and Pacific ethnicity is particularly evident in this figure.

Figure 10

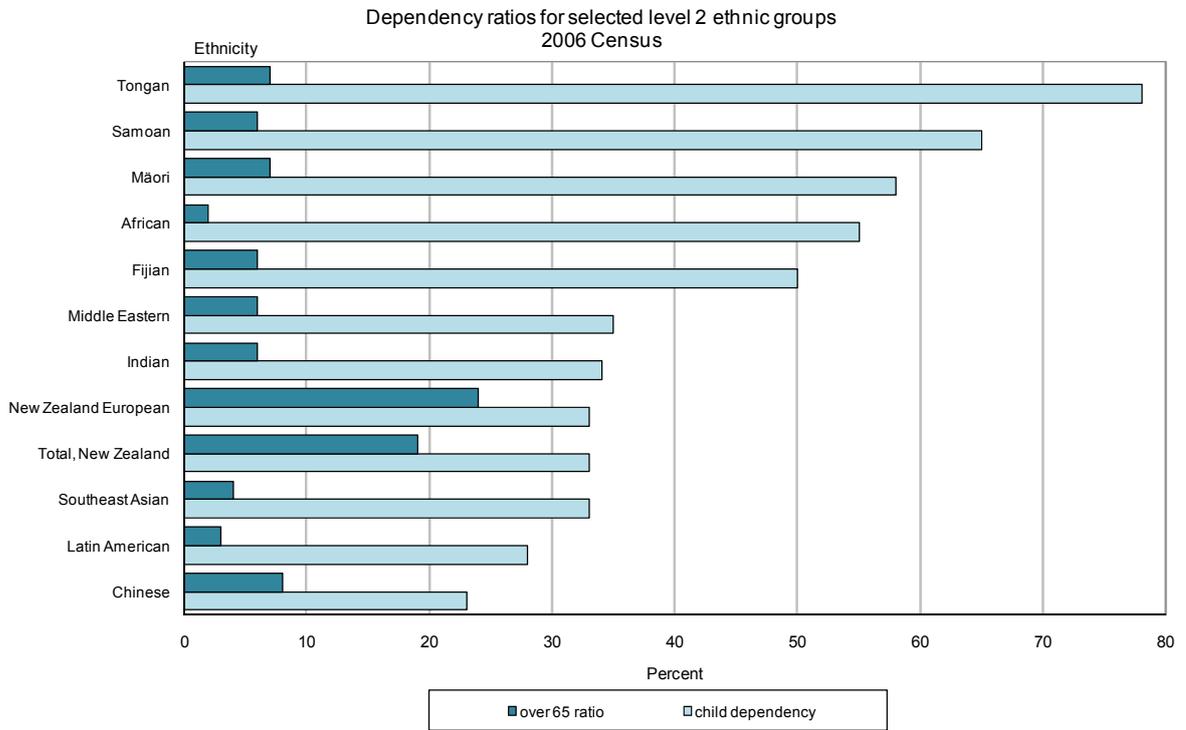**Ethnicity (level 1) and Age Structure for Selected Single and Combination Ethnic Groups, 2006 Census**
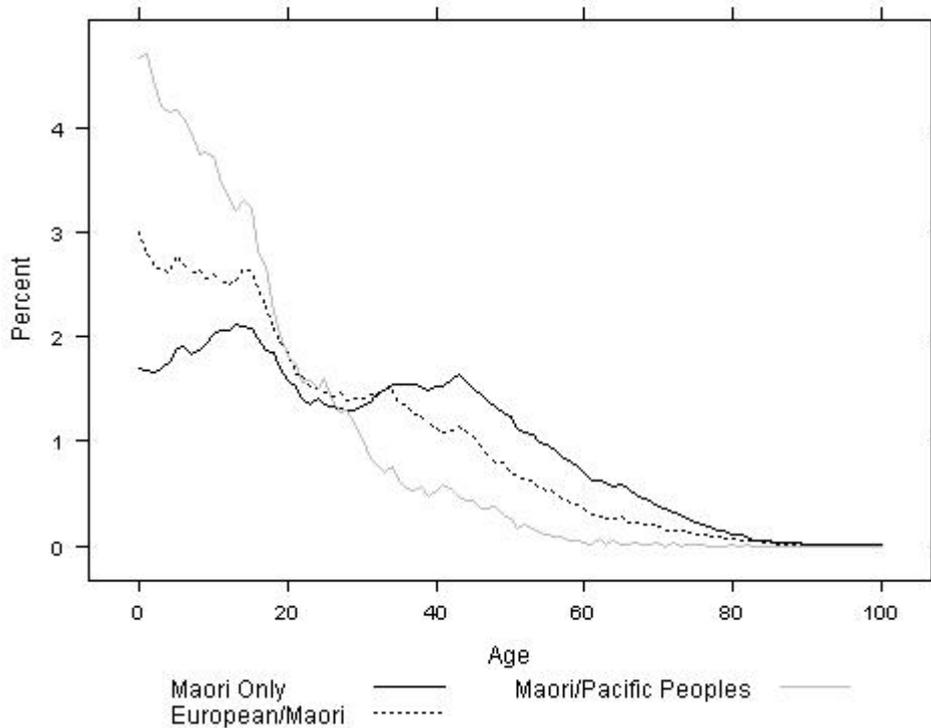
Age or dependency ratios

Dependency ratios provide an insight into different population structures. These ratios show the proportion of children and people aged 65 and over to the working age population. While they do not necessarily reflect dependency, since for example people aged over 65 may still be working, they are a useful summary measure of the age structure of the population. Calculating the effects of age or dependency ratios for ethnic groups is complex since people may state more than one ethnicity. Also as research on family ethnicity and ethnic intermarriage in New Zealand has shown, there may be a range of ethnicities within families and households. Nevertheless as a crude measure, dependency ratios do tell us something about the situation of different ethnic groups.

The age or dependency ratios in figure 10 reflect a number of different influences: fertility rates, life expectancy, length of time within New Zealand and the dynamics of the group. For example, the Chinese ethnic population had a very large proportion people aged 20–24 and consequently had one of the lowest dependency ratios of 31 dependent children or people aged 65 or over, for 100 adults aged 15–64 years. In contrast, the Tongan ethnic group with its very youthful population had a dependency ratio of 85 dependents per 100 working population, with the major component of dependents being children (78 children per 100 working age adults).

Figure 11

Dependency Ratios for Level 2 Ethnic Groups, 2006 Census

Dependency ratios for selected level 2 ethnic groups
2006 Census

Ethnicity

| Tongan |
| Samoan |
| Mäori |
| African |
| Fijian |
| Middle Eastern |
| Indian |
| New Zealand European |
| Total, New Zealand |
| Southeast Asian |
| Latin American |
| Chinese |

Percent

■ over 65 ratio   □ child dependency

Note: dependency ratios are calculated thus: child dependency = number under 15/working age population, over 65 dependency ratio = number 65 and over/working age population.

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3. Conclusions

This very brief discussion about the different age makeup of ethnic groups reveals the inherent variety within ethnic groups at all levels of the ethnic classification. Analysts need to be aware of these variations when analysing ethnic groups at the highest level of the classification.

For some groups such as Māori and Pacific peoples, analysis at this level works reasonably effectively as these groups show greater homogeneity in age structure. Yet even within the Pacific groupings, although these all have young populations, there is a contrast between people with Tongan and Tokelauan ethnicity (which had the highest dependency ratios) compared with the Fijian population, which had a total dependency ratio much closer to the New Zealand average (56 dependents per working population compared with 51 nationally). These differences have implications for policy makers when creating policies for individual groups.[29]

For other groups, namely Asian and MELAA, analysis at the highest level of the ethnic classification is unlikely to yield much useful information and could be misleading because of the greater diversity within these groups. The large population of Chinese students skews the age structure of the Asian population substantially. In the MELAA category, the considerable diversity of disparate populations also means the level 1 category would yield little information about the component groups.

Age structure is also likely to change in the future as populations become more settled in New Zealand. As the timeline in figure 12 shows, many of the diverse ethnic populations within New Zealand have arrived fairly recently and many of the characteristics of these populations are shaped by that migration history.

The variability in age structure between groups at the level two of the ethnicity classification reveals some of the issues involved when the ethnic characteristics of the population are analysed at the highest level of the ethnic classification.

Age structure is just one of the characteristics that shows variability at more detailed levels of the ethnic classification. Other social and economic characteristics such as religion, language, education and employment also vary markedly at more detailed levels of the ethnic classification.

Other issues such as whether a person is overseas-born or identifies with a range of ethnic group are also very important factors in variability of ethnic populations. As this brief analysis has shown the characteristics of a New Zealand-born population such as New Zealand Chinese are very different from that of the overseas born population despite their sharing a common ethnicity. The small numbers of some ethnic groups means that analysis at a more detailed level may be not practicable. It is doubly important, however, for the analyst to understand this complexity before making assumptions about some of the more diverse groupings, particularly, Asian and MELAA.

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[29] Statistics NZ, "Family Wellbeing indicators from the 1881-2001 Censuses", 61.

Figure 12

Timeline of Settlement in New Zealand
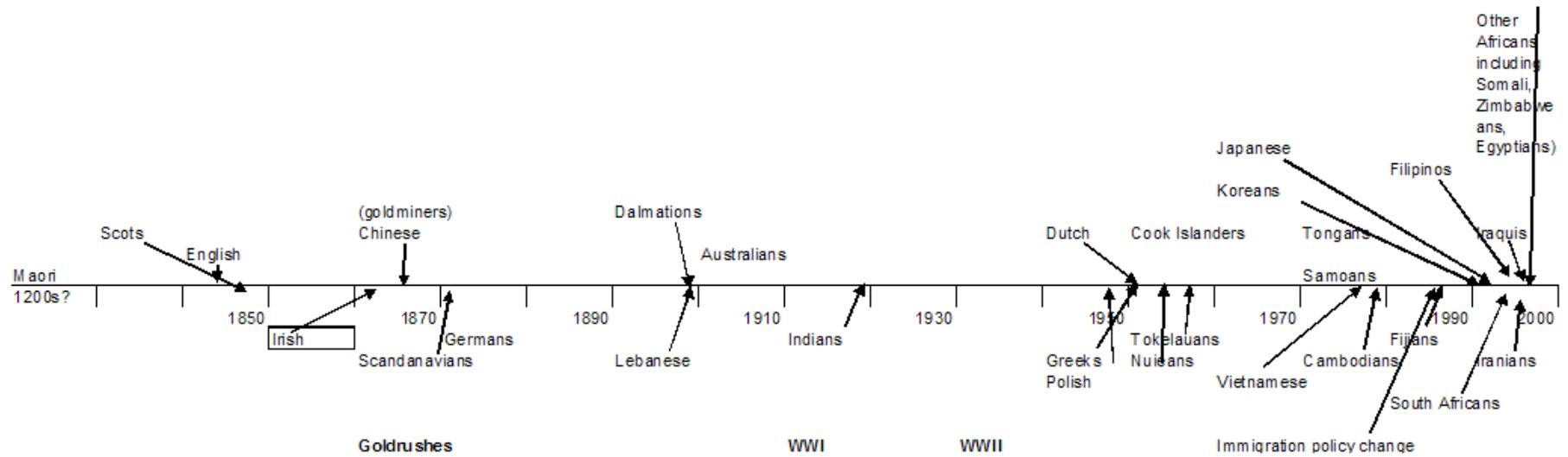
Source: Statistics New Zealand Yearbook 1990, Te Ara Encyclopaedia of New Zealand.

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We assess the levels of genetic differentiation between ethnic groups on one hand and between populations of the same ethnic group on the other hand with mitochondrial and Y-chromosomal data from several populations per ethnic group from the two major linguistic groups in Central Asia. This is not the case for Tajik populations where the mtDNA differentiation, like Y-chromosomal differentiation, is also significant between populations within this ethnic group. Schematic representation of genetic structuring at the ethnic group level. The different colours indicate genetic differences, with shades of a particular colour indicating relatively small differences. Each small circle represents a population, intermediate circles stand for an ethnic group. Does cultural diversity between ethnic groups, though small in magnitude, mat-ter for our understanding of political economy outcomes? To analyze whether the overlap between culture and ethnicity is relevant, we explore how ethnic heteroge-neity, cultural heterogeneity, and the overlap between culture and ethnicity affect civil conflict and public goods. We find empirically that both cultural and ethnic diversity have weak effects on civil conflict and public goods.