The Australian National University

a n u

CAEPR

Centre for Aboriginal Economic Policy Research

Discussion Paper

Social indicators of the Aboriginal population of Australia

A. Gray and H. Tesfaghiorghis

No.18/1991

ISSN 1036-1774
ISBN 0 7315 1297 9

SERIES NOTE

The Centre for Aboriginal Economic Policy Research (CAEPR) was established in March 1990 under an agreement between the Australian National University and the Commonwealth of Australia (Aboriginal and Torres Strait Islander Commission). In accordance with the Agreement, CAEPR operates as an independent research unit within the University's Faculty of Arts. CAEPR's principle objectives are to undertake research with the following aims:

- to investigate issues relating to Aboriginal employment and unemployment;
- to identify and analyse the factors affecting Aboriginal participation in the labour force; and
- to assist in the development of government strategies aimed at raising the level of Aboriginal participation in the labour force and at the stimulation of Aboriginal economic development.

The Director of the Centre is responsible to the Vice-Chancellor of the ANU and receives assistance in formulating the Centre's research agenda from an Advisory Committee consisting of senior ANU academics nominated by the Vice-Chancellor and Aboriginal representatives nominated by the Chief Executive Officer of the Aboriginal and Torres Strait Islander Commission and the Secretary of the Department of Employment, Education and Training.

CAEPR DISCUSSION PAPERS are intended as a forum for the dissemination of refereed papers on research that falls within the CAEPR ambit. These papers are produced for discussion and comment within the research community and Aboriginal affairs policy arena. Copies of discussion papers are available from Bibliotech, ANUTECH Pty Ltd, GPO Box 4, Canberra, ACT, 2601 (Phone: 06 249 2479 FAX 06 257 5088).

As with all CAEPR publications, the views expressed in this DISCUSSION PAPER are those of the author(s) and do not reflect an official CAEPR position.

Jon Altman
Director, CAEPR
Australian National University

ABSTRACT

This paper presents social indicators of the Aboriginal population in the context of the rapid demographic change that has taken place in the population. The paper identifies the problem of Aboriginal data, the fuzziness of the definition of Aboriginality, the non-utility of a static population structure analysis as well as arguments over the exact size of the Aboriginal population in arriving at meaningful social indicators of the population. This paper develops an analytical framework within which Aboriginal social indicators can be analysed by adopting a dynamic view of population change in which the consequences of the massive demographic change that has taken place over the last three decades are evaluated over a demographic time window covering the period 1981-2001.

The analysis has arrived at important social indicators; chief among them are the changing age-sex structure of the Aboriginal population, the rapid growth of persons in young and middle adulthood ages, and the accelerating growth of families and households. The rapid growth of persons in young and middle adulthood ages is reflected in declining Aboriginal employment indicators, while the growth of families and households is reflected in rising new demand for housing. The study also has documented substantial differences in Aboriginal social indicators by location of residence; and in particular, has found out that the relative size of the Aboriginal component of localities/communities is inversely related to the index of economic resources. The policy relevance of the study is that Aboriginal policy programs and initiatives have to address the new evolving population structures, and thus the proposed analytical framework and the findings of the study should provide valuable information for charting directions for new policy initiatives and programs.

Dr Alan Gray is Senior Research Fellow, Demography Program, Research School of Social Sciences, Australian National University. Dr Habtemariam Tesfaghiorghis was a Post-doctoral Fellow at the Centre for Aboriginal Economic Policy Research, Faculty of Arts, the Australian National University, when he co-authored this paper. He is now a Research Fellow, Graduate Program in Demography, National Centre for Development Studies, Australian National University and an Associate of the Centre for Aboriginal Economic Policy Research.

Foreword

In November 1990, Dr Alan Gray, then of the National Centre for Epidemiology and Population Health (NCEPH), Australian National University and Dr Habtemariam Tesfaghiorghis, then of the Centre for Aboriginal Economic Policy Research (CAEPR), Australian National University undertook a short consultancy for the Royal Commission into Aboriginal Deaths in Custody. This sort of applied consultancy research is encouraged in the Australian National University's contract with the Commonwealth of Australia (Aboriginal and Torres Strait Islander Commission), but a proviso for CAEPR staff undertaking any consultancy work is that the results of that work must be publicly available. In this case, an agreement was reached with the client that Drs Gray and Tesfaghiorghis's paper could be published once the final report of the Royal Commission was completed and tabled in Parliament. While the consultancy agreement was primarily with NCEPH, the decision to publish in the CAEPR Discussion Paper series was made to facilitate widespread distribution of this report to academic and policy-making arenas, particularly as there have been a number of requests for its distribution. The paper as published here is very similar to 'Social indicators of the Aboriginal population of Australia', a paper prepared for the Royal Commission into Aboriginal Deaths in Custody (November 1990), with the only differences being minor sub-editorial changes that I have suggested to make the paper stylistically consistent with the CAEPR Discussion Paper series.

Jon Altman
Series Editor
October 1991

The purpose of this paper is to present social indicators of the population of Aborigines and Torres Strait Islanders in Australia, within an analytical framework which unifies consideration of the various indicators within the context of the powerful demographic changes which are influencing the Aboriginal population. The perspective adopted in this paper has been chosen for its power to place disparate types of statistical information into a meaningful context, but it is by no means the only perspective which could have been adopted. At various points within the paper and in the concluding section, we point out how our interpretation might have differed had we adopted a different analytical perspective.

A perennial problem for any analysis of Aboriginal population data is inconsistency of estimates obtained from different sources. The main source of aggregate data about the size and characteristics of the population of Aborigines and Torres Strait Islanders has been the Australian census of population and housing, held every five years by the Australian Bureau of Statistics. It is well known that the levels of Aboriginal population enumerated at successive censuses have been inconsistent with one another, and markedly so, for each of the five censuses conducted from 1966 to 1986.

This inconsistency has been due partly to the use of different definitions and census questions, although the questions used to determine Aboriginality in 1971 and 1976 were almost identical, and so were the questions used in 1981 and 1986. Census questions are based loosely on the Australian Government's 'working definition' of Aboriginality, which has existed in various forms since 1968 (Department of Aboriginal Affairs 1981) and comprises three elements: Aboriginal or Torres Strait Islander descent; self-identification as Aboriginal or Torres Strait Islander; and acceptance as Aboriginal or Torres Strait Islander by the community with which the person is associated. The first two of these three elements are present in the definitions implied by census questions used since 1971, but the third is not.

Inconsistency may also be due to the changing propensity of individuals to identify themselves as Aborigines or Torres Strait Islanders, as often alleged by the Australian Bureau of Statistics (see, for example, Australian Bureau of Statistics 1987: 1; Choi and Gray 1985). There seems to be an assumption that because the Commonwealth working definition and the census questions both allow a person to identify as Aboriginal or as non-Aboriginal, then changes in self-identification must occur often; our personal experience is that changes in self-identification occur rarely. Given the substantial number of other factors which could influence the census estimates, as outlined by Choi and Gray (1985), it is of course not possible to establish the extent of changing identification, or if it exists at all other than as a convenient explanation. Among the other factors which influence the census estimates are underenumeration (that is

the level of inclusion in the census) and processing errors. Special census procedures for Aboriginal enumeration have been developed progressively over time, and the detail of their operation has certainly improved coverage. It is known that processing errors (that is, errors introduced during the production of data from the census returns) produced a net transfer from the Aboriginal category to the non-Aboriginal category of the population in 1981 (Choi and Gray 1985: 19).

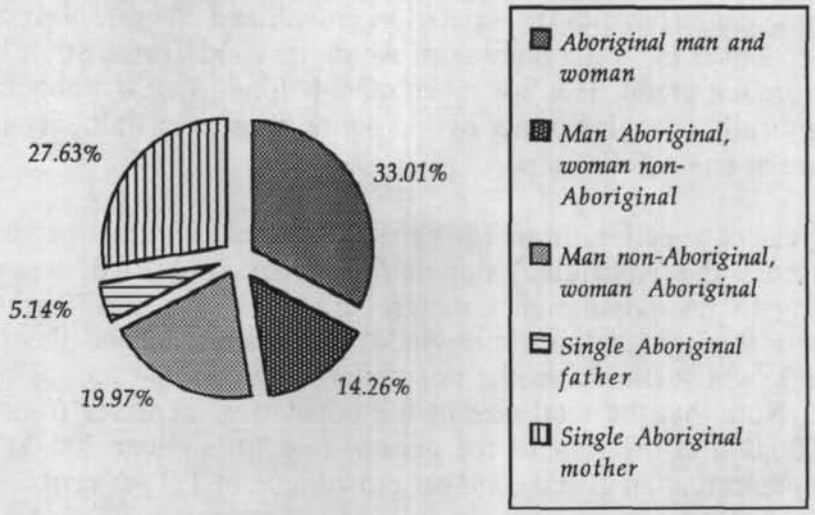
While the levels of enumeration in different censuses are not consistent, and even less consistent in some parts of the country than in others, it has always been found that the socioeconomic characteristics of the Aboriginal population appear very consistent as measured from one census to the next. For example, we find that unemployment rates form consistent trends over time from 1971 to 1986 in the census data for Australia as a whole and for various geographic components. For the most part, we use unadjusted census estimates of socioeconomic characteristics in this paper, but demographic estimates require much more extensive analysis and reconciliation of inconsistent data.

It should also be kept in mind that the concept of a separable 'Aboriginal' component of the Australian population is based on a number of problematic assumptions, and Aboriginality can to some degree be considered as a constructed identity which may not correspond closely with the identity within which a person operates as a social being from day-to-day (Jordan 1985). It is easy to pick holes in definitions. If we interpret the Commonwealth working definition literally, then there is no such thing as an Aboriginal baby because an infant does not identify itself with the Aboriginal category or any other category. This is not a trivial or facetious matter; for example, while it is possible to identify births to Aboriginal mothers through applying the working definition to women who give birth, there is no guarantee that all such babies will later be Aboriginal in the sense of conforming with the working definition themselves, and there will also be other babies born to non-Aboriginal mothers but Aboriginal fathers who will later be part of the Aboriginal population. In theory, a baby born to parents, who are both non-Aboriginal by the working definition but at least one of whom has Aboriginal descent, could also become a member of the Aboriginal population.

What appears to be a firm definition is actually extremely fuzzy. But as well as this, the Aboriginal population is only partly separable from the rest of the Australian population in other senses, both social and geographic. While there are many locations in Australia that are readily identifiable as Aboriginal or Torres Strait Islander communities, in the sense that nearly all the people that live there are Aborigines or Torres Strait Islanders, in fact most Aborigines and Torres Strait Islanders do not live in these places, but in other locations where non-Aboriginal people

are in the majority. Even within families and households, the extent to which Aborigines and non-Aborigines live together in the basic social units of Australian society is not often realised because Aborigines constitute such a small category in the total population. The Australian Bureau of Statistics identified 62,481 families living in households containing at least one Aboriginal or Torres Strait Islander person in the 1986 Census, and of these families the so-called reference person (household head) or the husband or wife of the reference person was Aboriginal or Torres Strait Islander in 54,134 families. These 'Aboriginal' families could be split into three almost equal categories: one

Figure 1. 1986 Census Aboriginal families - parents and couples.



Source: Jain (1989)

in three where both the man and woman were Aborigines; one in three where only one member of the couple was Aboriginal; and one in three where the family had a single Aboriginal parent (see Jain 1989: 5). In Figure 1, these three categories are further divided into five categories to show a little more detail.

While this introduction has dealt mainly with matters of definition, the data summarised in Figure 1 also represent the first set of social indicators in this paper. The figure is a readily comprehensible indicator of the extent to which the categories of 'Aboriginal' and 'non-Aboriginal' are mixed in the most basic of social institutions, families. It also shows

the extent to which single-parent families, particularly single-mother families, are found in Aboriginal communities in Australia. This is a topic treated subsequently in its socioeconomic context.

A demographic window on the Aboriginal population

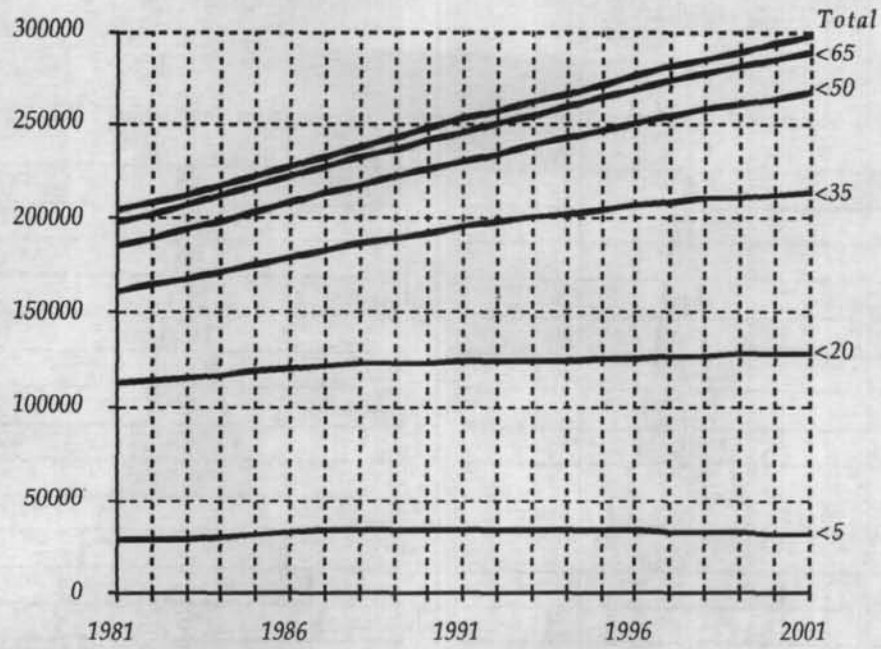
While acknowledging the serious issues of definition and enumeration which have just been discussed, it is useful for present purposes to use the 1986 Census as a benchmark for examining Aboriginal population structure. The combined sizes of the Aboriginal and Torres Strait Islander populations enumerated at the 1986 Census was 227,645, consisting of 206,104 people described as Aborigines and 21,541 described as Torres Strait Islanders (Australian Bureau of Statistics 1987). Considerable attention must be given to resolving the differences in level of enumeration of these populations from census to census, in order to determine characteristics of population growth and change. Nevertheless, arguments over the exact number of Aboriginal and Torres Strait Islander people are not productive; it is much more helpful to view a population as a dynamically changing entity over a period than to examine its size and structure at one point of time.

A 20 year perspective, from 1981 to 2001, is taken in this paper. When we discuss the Aboriginal population, unless qualified, we will be referring to the population structure of Aborigines and Torres Strait Islanders throughout this time window. The approach is illustrated in Figure 2, which illustrates the population in broad age groups over the period. Note that the total size of the population increases from a little over 200,000 at the start of the period[1] to a little under 300,000 at the end, representing an average annual growth rate of 1.9 per cent.

It should be stressed that the broad changes in population structure represented in Figure 2 and other analyses discussed here are based firmly in inevitable consequences of population change that has already occurred. In other words, while the perspective taken here is based partly on population projection, the assumptions behind the projection outlined in the following section are not critical to the outcomes. The projection is based on a moderate further decline in fertility and modest decline in mortality consistent with the targets and goals set out in the report of the National Aboriginal Health Strategy Working Party (1989). Changing these assumptions within bounds of reason makes only minor difference to the results little above or a little below 30,000 throughout the period, the 5-19 age.

It is very easy to see that some age groups are changing very little in size over the 1981-2001 period: for example, the 0-4 age group remains at a little above or a little below 30,000 throughout the period, the 5-19 age group (which constituted 41 per cent of the population in 1981) will grow by only 15 per cent by 2001 (when it will be reduced to 33 per cent of

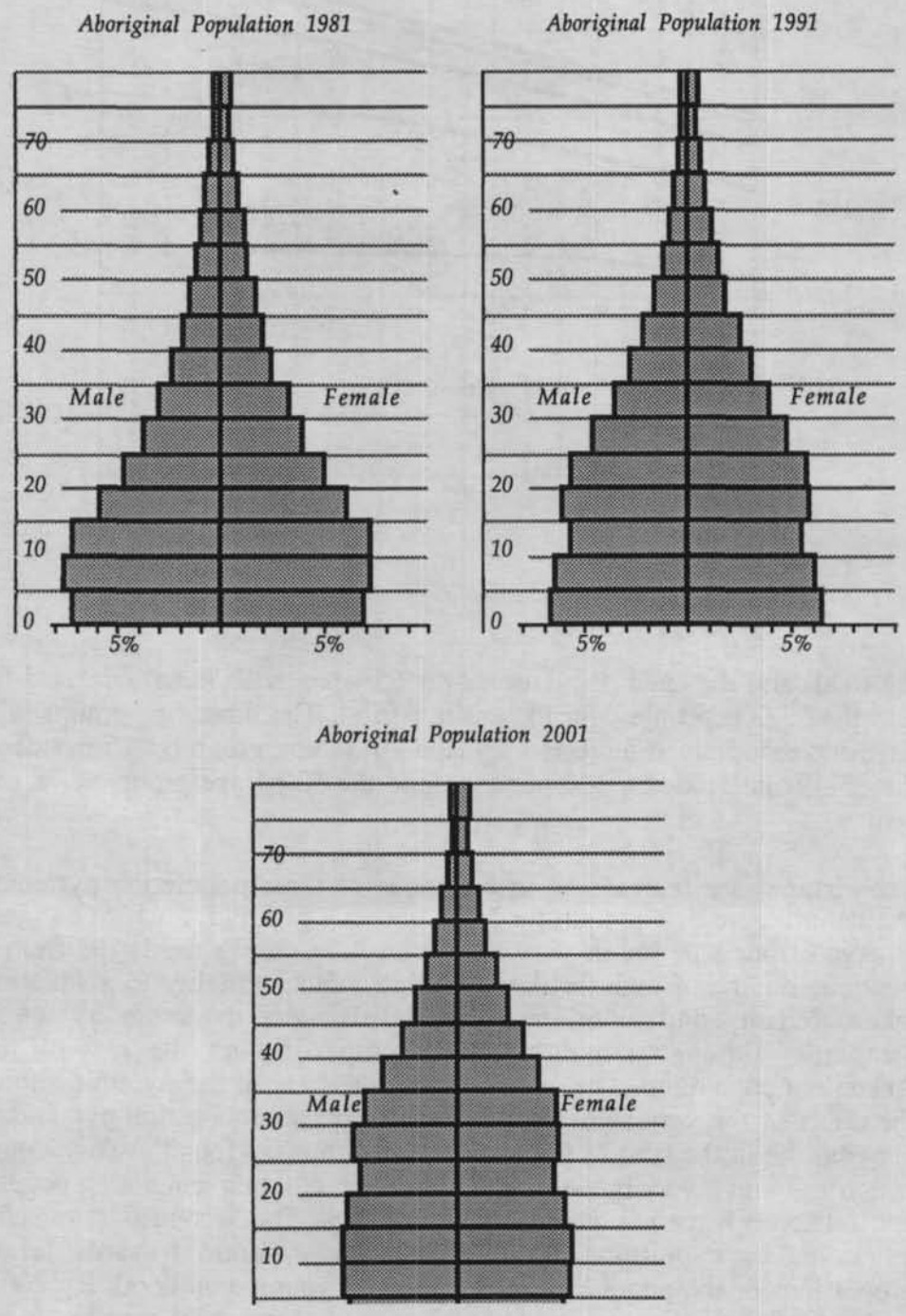
Figure 2. Aboriginal total population - 1981-2001.



the total) and the aged population over 65 years will have increased by less than 3,000 people over the entire period. The other age groups will have increased much more rapidly: the 20-34 age group by 75 per cent, the 35-49 age group by 120 per cent, and the 50-64 age group by 78 per cent.

The changes are represented in the series of three population pyramids shown in Figure 3. The first, for 1981, shows a population which had just emerged from a period of very rapid transition during the 1970s from a previous regime of high fertility and high infant mortality to a situation where fertility and infant mortality levels were moderate by world standards, although remaining high compared with the rest of the Australian population. The contraction at the base of the pyramid shows the effect of the very swift decline in fertility; otherwise, the pyramid is very similar to the type of population structure often found in developing countries, with a very broad base representing children and young people, and relatively very few people at higher ages. The second pyramid, for 1991, shows evolution of the population structure towards larger proportions of the population in the years of young adulthood. By 2001, in the third population pyramid, the process of change will have produced a population pyramid with similar numbers of people in each five-year age group up to an age of about 35 years, and it is only in the higher age

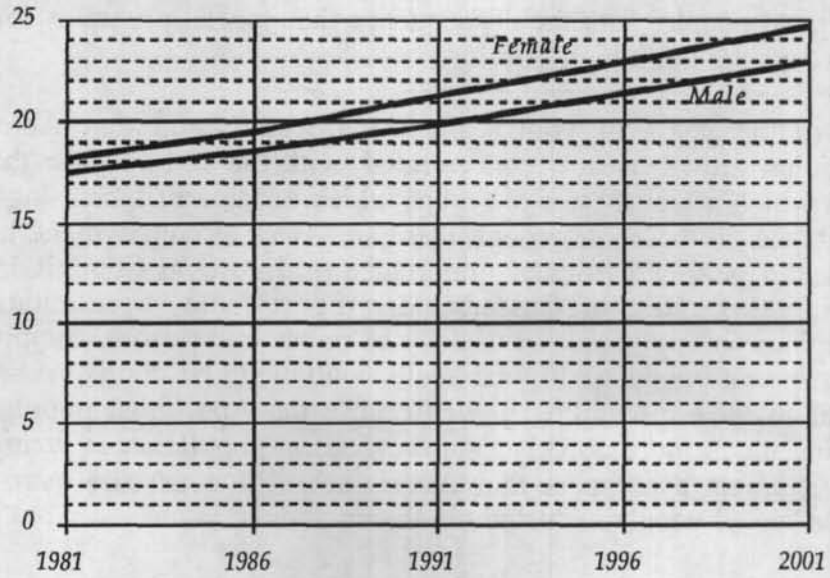
Figure 3. Age-sex structure of the Aboriginal population.



groups (those aged more than 15 years in 1981) that the strongly pyramidal shape will still be observed.

Figure 4 illustrates another perspective on this change in population structure. It shows the median age of Aboriginal males and females over the period 1981-2001, increasing from 17 to 18 years in 1981 to 23 to 25 years in 2001. The median age is the age below which 50 per cent of the population are located. Note that the median age for females is increasingly higher than the male median.

Figure 4. Median age of Aborigines and Torres Strait Islanders 1981-2001.



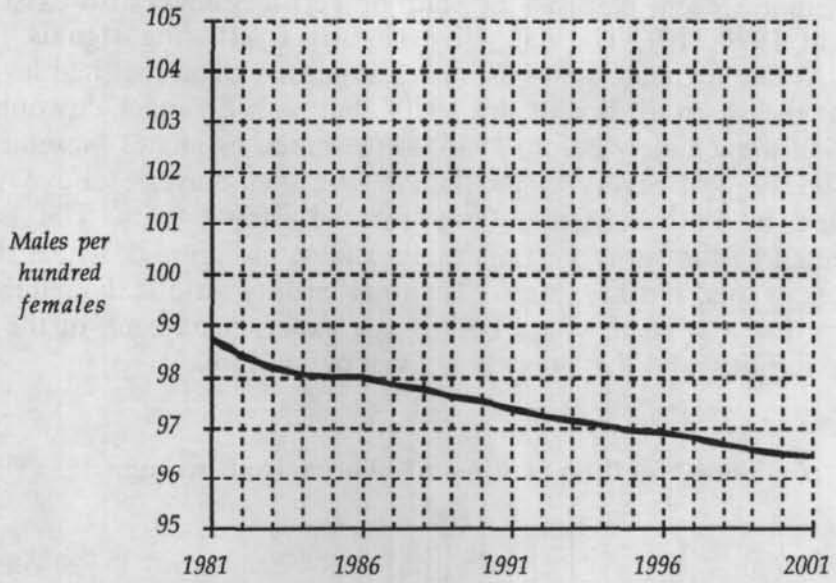
These are massive changes in population structure, and it is to be stressed that they are virtually inevitable. The only prospect which would modify these changes would be a very large increase in birth rates, for example a doubling and the prospect of return to the very large families (of 10 and more children for many women) which produced the high birth rates of the 1950s and 1960s seems most unlikely. What is happening to the structure of the Aboriginal population during the period we are considering is the effect of a change of demographic regime, a demographic transition, which has already occurred in the sense that the process determining the change is complete but the dynamic consequences have still to work themselves through over a long period of time.

Clearly, the concerns of policy initiatives and programs which addressed the previous structure of the Aboriginal population will become increasingly less relevant to a population which is evolving with a very different structure than it had previously. Attention to maternal and child health issues, on the basis of perceptions which recognised the very high fertility of the past and the very large proportions of infants and children in Aboriginal and Torres Strait Islander families, was very strong in past Aboriginal health programs and remains strong in current programs. While attention continues to be deserved as long as disadvantage exists, the priority of programs aimed at maternal and child health should necessarily be tempered with recognition of the fact that infants and young children form an increasingly small component of the population of Aborigines and Torres Strait Islanders. Similarly, education programs are aimed mainly at age groups which are growing rather slowly, and for the next decade or so at least, there will continue to be few aged Aboriginal people, with the consequence that special programs for these age groups are not a high priority.

It is in the years of young and middle adulthood that Aboriginal population growth is now concentrated, with the consequence that it is issues which affect these age groups which become of increasing policy importance. In these age groups, there are issues of employment, housing and health, and of particular importance to the Royal Commission into Aboriginal Deaths in Custody, disproportionate representation of Aborigines among people in custody of police and prisons. Suppose, for example, that young Aboriginal adults continue to be imprisoned at rates similar to those prevailing now. Because the Aboriginal population is growing much more quickly than the general population at young adult ages, there is a prospect that Aborigines will constitute even larger proportions of people in custody in the immediate future.

To an extent hidden by the way that the data have been presented so far is the fact that the population of Aborigines and Torres Strait Islanders is increasingly a more female population than it was in the past. Figure 5 shows the masculinity ratio (number of males per 100 females) of the population during the 1981-2001 period. The ratio drops from almost 99 to between 96 and 97. This is a continuation of a trend of very long standing. The earliest counts of the Aboriginal population always revealed large excesses of males over females, and by 1947 there were still 110 males per 100 females in census counts (Smith 1980). The ratio continued to fall and appears to have crossed below 100 males per 100 females between 1976 and 1981, since males were still in a majority according to the 1976 Census. There are two reasons for these changes. One is the effect of older age structure: in human populations, males outnumber females at birth (by about 105:100) but the sex ratio decreases progressively with age, and an older population generally has a lower sex ratio. The other cause is the extremely high level of Aboriginal adult

Figure 5. Masculinity of the Aboriginal and Torres Strait Islander population.



mortality and its very heavy toll on men in particular, which on current indications will actually see a slight widening in the already wide gap between male and female life expectancy.

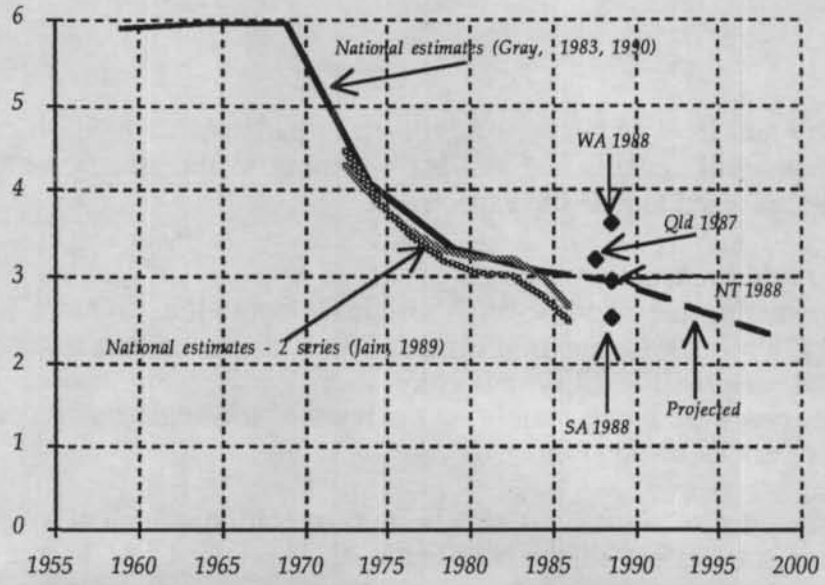
Demographic indicators

In constructing the window on Aboriginal population structure for the period 1981 to 2001, shown in Figures 2 to 5 above, certain assumptions about Aboriginal fertility and mortality levels were made. These assumptions were based mainly on analyses of incomplete and deficient data for periods before 1986.

In the absence of substantial effects from migration, which at a national level has little effect on the population of Aborigines and Torres Strait Islanders, changes in population structure are due to entry into the population through births and departure from the population through aging and death. Of these three, only ageing operates in a purely predictable deterministic manner. Fertility, often expressed in terms of age-specific birth rates for women, is notoriously difficult to predict accurately even from good historical series, while population mortality levels generally change in a slow manner but do not affect population projections to a substantial degree even when they change more quickly than is usual.

While fertility levels can change very quickly, and indeed did change extremely quickly in the Aboriginal population during the 1970s, the trend established after that period appears to be less volatile. There have been two recent sets of estimates at national level (Jain 1989 and Gray 1990a); more recent data sets at State or Territory level also exist (see Thomson 1990: 10). The data give slightly conflicting signals about trends. At one extreme, Jain's estimates suggest a trend that had levelled off after the sharp decline of the 1970s, but with a further downturn in the period immediately before 1986; at the other, estimates presented by Thomson suggest levels in the late 1980s that may be above those presented by both Jain and Gray for the early 1980s. The trends represented by the various estimates are shown in Figure 6, which shows estimates of total fertility ratios. (The total fertility ratio is the number of children that a woman would bear if she experienced each of the age-specific fertility rates that apply at a given point of time.)

Figure 6. Total fertility ratios of Aboriginal women.

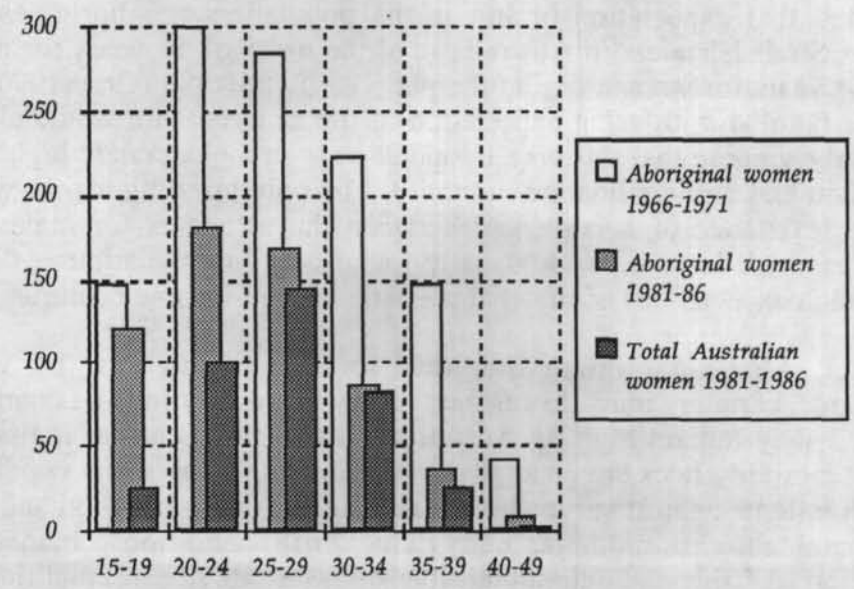


The State and Territory estimates at the right of the figure come from only some States, but it has been suggested that there are only slight variations in Aboriginal fertility levels by geographic divisions (Gray 1990a). It would therefore be dangerous to suggest that Aboriginal fertility levels might fall too rapidly. On the evidence summarised here, it might even be supposed that they have been increasing very slightly. On the other hand, detailed analysis of differentials (ibid.) suggests that the

most powerful determinant of Aboriginal fertility levels is education, and that it should be expected that past gains in levels of educational attainment by Aboriginal women will continue to push fertility levels gently downward. The projected levels shown in the figure are based on this premise and use a continuation of the recent trend of decline, but damped in the current 1986-1991 period because of the uncertainty generated by available State estimates.[2] If Aboriginal fertility levels actually underwent a modest increase in the period 1981-2001, or even no decline, the size of the age groups under 20 years of age, as shown in Figures 2 to 5, would increase in a corresponding manner. However, this would not alter greatly the broad shape of the distributions given, except for the youngest age cohorts aged 0-4 and 5-9 in 2001 which would be quite a lot larger than shown.

Broad fertility measures are not as useful as more detailed data classified by age. Figure 7 compares the age distribution of Aboriginal age-specific birth rates in the period 1981-1986 with equivalent rates for the total Australian population in the same period and with estimated Aboriginal rates for the period 1966-1971. The comparison serves two purposes. First it emphasises that above age 25 there is little difference between Aboriginal rates and rates for the total Australian population in the recent past. Birth rates for young Aboriginal women are, however, very much

Figure 7. Age-specific birth rates.



higher than for Australian women in general, particularly in the case of teenage women. Second, the figure shows the very great extent of the fertility decline which occurred for Aboriginal women, but note that the proportionate decline was smallest for young Aboriginal women.

Possible deviations from fertility projections affect only the very youngest age groups in a short period. It is for this reason that it is possible to be confident that the main components of growth in the Aboriginal population are in the years of young to middle adulthood. Because these people are already living, they will pass naturally into their young and middle adult years as they age, and they are subject only to the moderate mortality that applies in these age groups. Yet while age-specific death rates in the ages of young and middle adulthood are not high in absolute terms, for Aboriginal men and women they are extremely high relative to rates which apply in the rest of the Australian population.

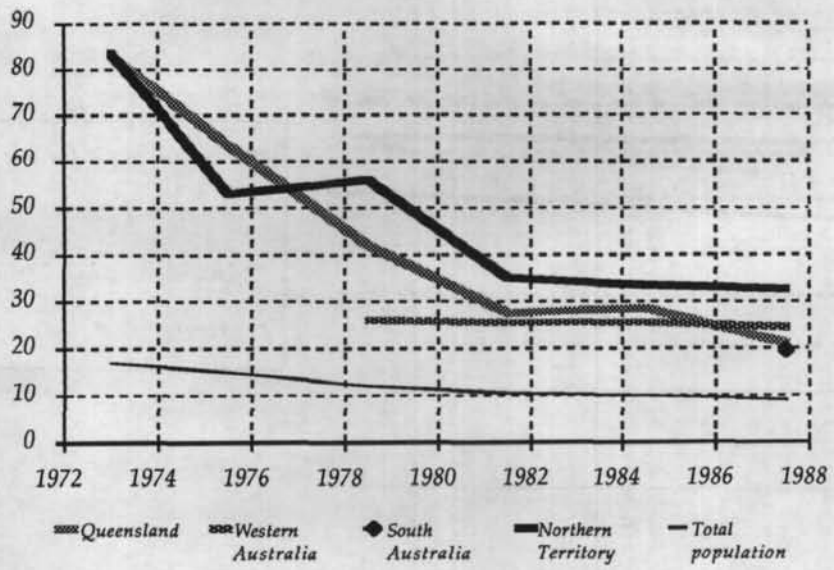
The indicator used most frequently to describe mortality levels is the expectation of life at birth. It should be emphasised that this measure is not so much a measure of mortality as a measure of the intensity of survival: it is an estimate of the average number of years that a person would live from birth until death subject to the age-specific death rates of a particular period. In most human populations, today or in history, expectation of life at birth has been very strongly correlated with levels of infant mortality, because high infant mortality levels operate in a fundamentally simple manner to reduce the average number of years that a person can expect to live from birth. For this reason, when it is reported that expectation of life in the population of Aborigines and Torres Strait Islanders in Australia is of the order of 56 years for males and 64 years for women during the period 1981 to 1986 (Gray 1990b), a reader familiar with using expectation of life as a measure would almost certainly suppose that this was a population with a moderately high level of infant and early childhood mortality. The only puzzling aspect would be the existence of a large gap between the estimates for males and females; such large gaps are usually found only in populations with the very high expectations of life characteristic of high-income countries.

In fact, Aboriginal infant mortality levels are now low by world standards, certainly much lower than in any of the low-income countries, even if they remain high by Australian standards. As social indicators, infant mortality rates are generally used to highlight the social conditions which militate against survival of babies, through poor nutrition and poor antenatal care of mothers, unhygienic birth conditions, inadequate nutrition of babies and communicable diseases, all rife in conditions of socioeconomic deprivation. The situation with Aboriginal births, here taken to mean births to Aboriginal mothers, is somewhat different. This is because very great reductions in Aboriginal infant mortality levels occurred during a very short period from the late 1960s through to about

1980, not so much as a result of improved socioeconomic conditions but as a result of extensive public health measures aimed specifically at reducing embarrassing visible statistics about Aboriginal infant mortality levels. The extension of low-cost primary antenatal and post-natal care to Aboriginal mothers and their infants was always supplemented by concurrent provision of high-cost perinatal care, often involving air transport of mothers-to-be from remote areas into distant well-equipped hospitals, and their retention there for weeks before, and after, the birth. In these circumstances, the infant mortality rate is not so much a social indicator as an indicator of the extent to which interventionist care can result in making a social indicator misleading. For there is no guarantee that the social and economic conditions of Aboriginal communities which were associated with high infant mortality in the past have improved much at all.

Reliable data which exist on trends in infant mortality rates for some States are summarised in Figure 8. The various series shown are from Thomson (1990). Despite some variability in the series of three-year averages, because of small numbers of cases, it can be seen that a rapid decrease during the 1970s was followed by what was apparently a more moderate rate of decrease during the 1980s. Because the rates for the total Australian population had been falling over the same period, Aboriginal rates which were approximately five times as large as those for the total

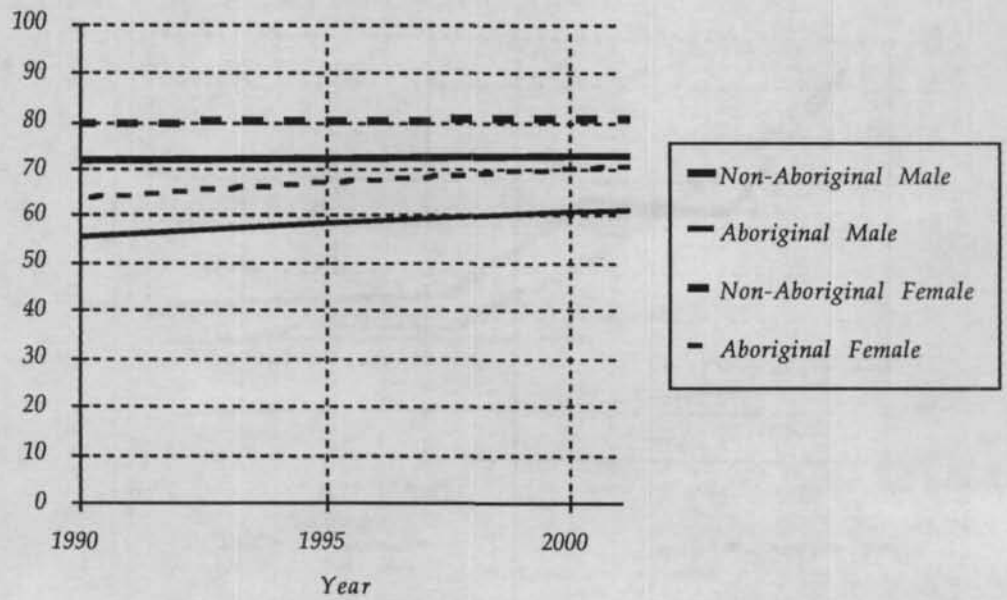
Figure 8. Estimates of infant mortality rates.



population of Australia during the early 1970s were still on average three times as high in the second half of the 1980s.

Until recently, it has been difficult to assess prospects for Aboriginal mortality realistically, because official policy has insisted on unrealistic mortality targets and because there was little reliable information about existing mortality levels. During the 1980s, especially after the work of a Task Force on Aboriginal Health Statistics in 1984, all States and Territories, except Queensland, have begun to identify Aboriginal deaths on death notification forms filed for registration of deaths. In general, these collections have had initial coverage problems; in some cases these have been resolved satisfactorily and in other cases they have persisted. The series of data they provide can, however, be expected to improve into a viable data set for assessment of mortality trends in the future. Data available for some States has been sufficiently accurate to produce baseline sets of mortality rates (see, for example, estimates for Western Australia by Hicks 1985, for the Northern Territory by Devanesen et al. 1986 and Plant 1988, and more recent data summarised by Lee et al. 1987, the Australian Institute of Health 1988 and Thomson 1990). Other estimates refer to sections of States (for example, Gray and Hogg (1989) for western New South Wales, and Khalidi (1990) for central Australia).

Figure 9. Trend in expectation of life.



While direct estimates of Aboriginal mortality at a national level are not available, it has been possible to produce indirect estimates which reflect baseline levels of mortality during the period 1981-1986 (Gray 1990b).

There is no reliable information about trends at a national level. However, the National Aboriginal Health Strategy Working Party (1989) has recently produced a set of achievable targets for the improvement of some aspects of Aboriginal health, and these can be used to construct projections of mortality levels. Figure 9 shows projected levels of expectation of life over the 1990-2001 period; the estimates for the Aboriginal population in 1990 are national estimates for the 1981-1986 intercensal period, their application to 1990 being justified on the grounds that there is currently no evidence of improvement of Aboriginal life expectancy at a national level.

Geographical distribution

There are two aspects of geographical distribution which are particularly relevant as social indicators. The first is the absolute distribution of Aborigines and Torres Strait Islanders throughout the country, and the second is the relative distribution of Aborigines and non-Aborigines. The first deals with where Aboriginal people are to be found, the second with the extent to which they are found separate from the non-Aboriginal population in different parts of Australia.

One summary measure of geographical distribution is provided by considering major urban areas (contiguous urban clusters of 100,000 people or more), other urban areas, and rural areas within States and Territories. Table 1 summarizes this information from the 1986 Census, from both absolute and relative perspectives.

There are several observations that can be made on the basis of the distribution in Table 1. Note (from panel B of the table) that approximately one-quarter of the Aboriginal population was enumerated in Queensland and one quarter in New South Wales; these two States together also contain just over half total Australian population, although with greater concentration in New South Wales. Of the remaining States and Territories, Western Australia and the Northern Territory contained proportions of the Aboriginal population which were much larger than their shares of the total population, and Victoria, South Australia and the Australian Capital Territory contained proportions of the Aboriginal population which were considerably less than their shares of the total population. Only in Tasmania were the two proportions approximately equal.

In Panel C of Table 1, it can be seen that approximately 33 per cent of the Aboriginal population was located in rural areas and more than 40 per cent in urban areas outside the major cities, proportions much higher

Table 1. Geographical distribution of Aborigines and Torres Strait Islanders and the total population, 1986 Census.

State	Aboriginal population				Total population			
	Major urban	Other urban	Rural	Total	Major urban	Other urban	Rural	Total
(A) Population numbers								
NSW	21416	27352	10243	59011	3658459	1088754	654668	5401881
Vic	5986	5224	1401	12611	2771317	743360	504801	4019478
Qld	11091	28788	21389	61268	1201,147	840395	545773	2587315
SA	5696	4580	4015	14291	917000	221036	207909	1345945
WA	8949	15775	13065	37789	895710	296657	214562	1406929
Tas	1351	3460	1905	6716	127106	197751	111496	436353
NT	-	10700	24039	34739	-	111059	43789	154848
ACT	1048	-	172	1220	247194	-	2213	249407
Australia	55537	95879	76229	227645	9817933	3499012	2285211	15602156
(B) Percentage distribution by States								
NSW	38.6	28.5	13.4	25.9	37.3	31.1	28.6	34.6
Vic	10.8	5.4	1.8	5.5	28.2	21.2	22.1	25.8
Qld	20.0	30.0	28.1	26.9	12.2	24.0	23.9	16.6
SA	10.2	4.8	5.3	6.3	9.4	6.3	9.1	8.6
W A	16.1	16.5	17.2	16.6	9.1	8.5	9.4	9.0
Tas	2.4	3.6	2.5	3.0	1.3	5.7	4.9	2.8
NT	-	11.2	31.5	15.3	-	3.2	1.9	1.0
ACT	1.9	-	0.2	0.5	2.5	-	0.1	1.6
Australia	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(C) Percentage distribution within States								
NSW	36.3	46.3	17.4	100.0	67.7	20.2	12.1	100.0
Vic	47.5	41.4	11.1	100.0	68.9	18.5	12.6	100.0
Qld	18.1	47.0	34.9	100.0	46.4	32.5	21.1	100.0
S A	39.9	32.0	28.1	100.0	68.1	16.4	15.5	100.0
WA	23.7	41.7	34.6	100.0	63.7	21.1	15.2	100.0
Tas	20.1	51.5	28.4	100.0	29.1	45.3	25.6	100.0
NT	-	30.8	69.2	100.0	-	71.7	28.3	100.0
ACT	85.9	-	14.1	100.0	99.1	-	0.9	100.0
Australia	24.4	42.1	33.5	100.0	62.9	22.4	14.7	100.0

Continued over page.

Table 1. Continued.

State	Aboriginal population: Major urban	Other urban	Rural	Total
(D) Aborigines and Torres Strait Islanders as percentage of total population				
NSW	0.6	2.5	1.6	1.1
Vic	0.2	0.7	0.3	0.3
Qld	0.9	3.4	3.9	2.4
SA	0.6	2.1	1.9	1.1
WA	1.0	5.3	6.1	2.7
Tas	1.1	1.7	1.7	1.5
NT	-	9.6	54.9	22.4
ACT	0.4	-	7.8	0.5
Australia	0.6	2.7	3.3	1.5

Source: Compiled from Australian Bureau of Statistics, 1986 Census tabulations.

than in the total population. Indeed, less than 25 per cent of the Aboriginal population was located in the major urban areas, while more than 60 per cent of the total Australian population was concentrated in those cities. The pattern is much the same in most States, but is very markedly different in the Northern Territory and in the Australian Capital Territory. In the Northern Territory, a very large proportion of the Aboriginal population is to be found in rural areas.

The effect can be seen in Panel D of the 22 section-of-State categories, there is only one that has an Aboriginal population greater than ten per cent of the total population, and that is rural areas of the Northern Territory, where in fact over half the total population consists of Aboriginal people. It can also be noted that all major urban areas contain Aboriginal population proportions which are less than the overall proportion of 1.5 per cent of the Australian population.

It is generally believed that the proportion of the Aboriginal population located in urban areas, particularly major urban areas, has been increasing over time, and there are reasons based in logical conclusions from analysis of historical trends for believing that this has been the long-term trend. However, during the 10 year period from 1976 to 1986 there appears to have been little net movement between the major urban areas and other parts of Australia (Gray 1989a), and the major urban areas of New South Wales and Victoria actually seem to have been losing Aboriginal population throughout the period.

Social and economic indicators

We have noted that the profile of the population of Aborigines and Torres Strait Islanders is changing rapidly in terms of its age-sex composition, as a consequence of a demographic transition which occurred over a remarkably short period of time. Rapid growth in the ages of young and middle adulthood focuses attention onto social indicators which provide information about the status of people in these age groups in particular.

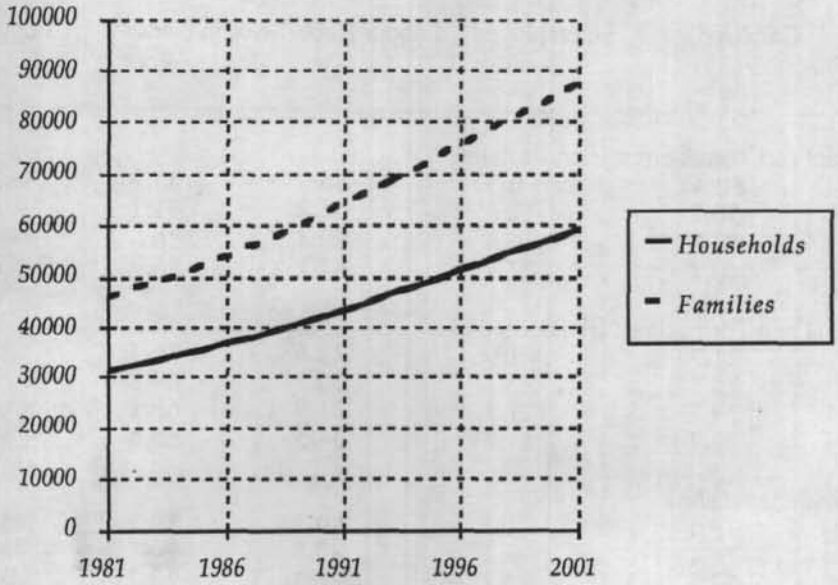
It should be clear, for example, that if the number of people moving into the ages in which families are being formed is growing rapidly, then the numbers of Aboriginal families and households must also be increasing rapidly. Figure 10 illustrates just how rapidly. It is based on applying age-sex-specific household headship rates, derived from 1986 Census data for Aboriginal households[3] to the age structure of the Aboriginal population during the 1981-2001 period. The number of households with an Aboriginal head ('reference person') is increasing at an average annual rate of 3.2 per cent during the period, from 31,000 in 1981 to 59,000 in 2001. This is much more rapid than the rate of increase of the Aboriginal population, which has an average annual rate of increase of about 2 per cent. Correspondingly, the number of Aboriginal families will also have grown from 46,000 in 1981 to 87,000 in 2001.

Again it is necessary to emphasise that these changes are no more than consequences of ageing of people already living, and are quite firm. If anything they are on the conservative side, because previous censuses indicate that the average number of Aboriginal families per household has been decreasing slowly, with the possible implication that headship rates have been increasing and will continue to do so. Rapid growth in numbers of households during the current period follows a period of rather slow growth during the 1970s; consistently-based estimates indicate that between 1971 and 1976 the growth rate in the number of Aboriginal households was about 1.3 per cent, increasing to 2.3 per cent during 1976 to 1981.

The recent accelerating growth in numbers of families and households reflects changes in birth rates and chances of infant survival from 20 to 40 years earlier. Its implication for policy and planning in Aboriginal affairs is that after a period of respite, when there was a real chance of making an impact on backlogs of inadequate housing in Aboriginal communities, new demand is, and will continue to place, extreme pressure on all housing programs.[4]

The age groups which are increasing rapidly in size are also the age groups in which economic activity through employment is common in the wider society. Participation in employment is a measure of the economic independence of adults. In a welfare state, in which economic support is available from government for people who do not work, it is not

Figure 10. Aboriginal families and households 1981-2000.



necessarily a measure of economic well-being, even though it is possible or likely that people in employment will have higher incomes and economic power than people who are not employed. Moreover, it should also be recognised that the quality of a person's employment is a factor in the person's feeling of economic empowerment.

Despite these qualifications, it is nevertheless certainly true that many Aboriginal Australians and non-Aboriginal Australians share negative perceptions of reliance on government welfare, even though the nature of these negative perceptions might not be the same for all people. Rates of employment and labour force participation are, more than anything else, indicators related to the social roles which people adopt in their communities, in the sense that the process of earning income is regarded as a valued social role which confers status on the person engaged in that activity. While communities of people might also value other social roles as highly or more highly, it is in this sense that labour force data function as very useful social indicators.

Table 2 displays trends in economic activity of Aboriginal and non-Aboriginal Australians during the period 1971 to 1986. The standard way of presenting labour force data is to calculate a participation rate, which is the proportion of a population group who are in the labour force (employed or seeking work), and an employment rate and an unemployment rate, each of which is calculated as a proportion of those

Table 2. Economic activity of people aged 15 years and over, 1971-1986.

Year	Employed	Unemployed	Labour force	Not in labour force[a]	Population
Aboriginal and Torres Strait Islander males					
1971	60.4	6.5	66.9	33.1	28943
1976	56.2	12.6	68.8	31.2	45649
1981	47.0	16.4	63.4	36.6	44919
1986	40.4	22.7	63.1	36.9	66419
Aboriginal and Torres Strait Islander females					
1971	21.7	1.9	23.6	76.4	28005
1976	25.1	5.1	30.2	69.8	45677
1981	24.8	7.1	31.9	68.1	46901
1986	22.7	11.8	34.5	65.5	70714
Total Australian males					
1971	79.1	1.2	80.3	19.7	4532154
1976	76.1	3.2	79.3	20.7	4884460
1981	73.1	4.2	77.3	22.7	539492
1986	66.9	6.6	73.5	26.5	5904292
Total Australian females					
1971	36.3	0.8	37.1	62.9	4553432
1976	41.6	2.2	43.8	56.2	4973640
1981	42.5	3.1	45.6	54.4	5524497
1986	42.3	4.5	46.8	53.2	6061019

a. Includes people whose labour force status was not stated in 1986.

Source: Compiled from Australian Bureau of Statistics, 1986 Census tabulations.

people participating in the labour force. This approach is not adopted here, because it is in some ways misleading. Rather, Table 2 shows simple proportions of people in each of the categories employed, unemployed (meaning looking for work) and not in the labour force.

Table 2 shows extremely clear trends. In 1971, 60 per cent of Aboriginal men were employed, but by 1986 this proportion had fallen to 40 per cent, and during the same period the proportion unemployed increased from 6.5 per cent to 22.7 per cent. While the proportion not in the labour force increased slightly during the period, it can be seen that most of the changes took place within the labour force, that is, decreases in employment were more or less matched by increases in unemployment. This was not the case for the total Australian population, where much lower labour force participation softened the impact of lower employment levels. Employment of Aboriginal women first rose then gradually fell

back during the period, while labour force participation increased rapidly, with the result that unemployment levels rose dramatically. This differs from the experience of Australian women in general, the proportion in employment having remained rather steady after an early jump, although unemployment has increased as a result of increased participation.

It is evident from this analysis that Aborigines have fared relatively badly in the contractions of employment opportunities during the last two decades. Part of the reason for this has been the disappearance of employment in industries in which Aboriginal people participated strongly in the past. For example, 24 per cent of Aborigines in employment in 1971 were employed in primary industries (agriculture, forestry, fishing and hunting in the census classification) but this proportion had already fallen to 12 per cent in 1976 and declined further to only 7 per cent in 1986, only marginally higher than in the total Australian population, most of whom were city-dwellers. These brash figures reflect the well-known story of displacement of Aboriginal stockmen from the pastoral industry, and in many cases from their homes on cattle stations, during the period after the mid-1960s. This process has often been ascribed to equal-pay decisions at around that time, but it also occurred in States such as South Australia in which Aborigines had long had equal pay, and it occurred in other rural industries as well, such as the picking industries in eastern Australia. It appears in fact to have been a result of micro-economic changes in rural industries which discouraged costly use of labour and encouraged mechanisation. Between 1971 and 1986, the worker status of employed Aborigines has remained rather stable, 96 per cent being wage or salary earners. On the other hand, the percentage of wage and salary earners for other Australians has declined from 87 to 83 per cent over the same period. The percentage of Aborigines in self-employment or employers in 1986 was 3.8 per cent compared to 16.2 per cent for the total population.

A contrasting difference between the two populations is the division between the public and private sector of employment as shown by Table 3. While Aboriginal employment at all levels of government has increased from 31 per cent in 1976 to 40 per cent in 1986, for the total population public sector employment has remained stable at 25 per cent over the period. This shows heavy dependence of Aboriginal employment on the public sector, while the majority of the total population depends on the private sector. There is also evidence that the role of the private sector suggested by census data is exaggerated for Aborigines, in that much or even most of the 'private' employment is actually government-funded.

An analysis of income data from the 1986 Census is given in Table 4. As noted earlier, incomes of Aboriginal households are often the incomes of recipients of government social security payments, which tend to equalise

incomes in households where people are employed and those where people are not. Two descriptive summary measures of income are shown in the table: the median income for a category of people, families or households, which is the level above or below which 50 per cent of incomes fall; and the percentage of the category earning incomes of less than $9,001 in 1986. This is an arbitrary point set by the Australian Bureau of Statistics

Table 3. Employment/industry sector by sex: Aboriginal and total population, 1976-1986 Census.

Industry sector	1976[a]	1986
Aborigines: males		
Federal Government	6.8	8 5
State Government	18.0	20.9
Local Government	6.9	9.3
Private sector	68.3	54.7
Not stated	NA	6.6
Total	100.0	100.0
Aborigines: females		
Federal Government	8.4	11.0
State Government	20.2	27.3
Local Government	1.4	2.9
Private sector	70.0	51.3
Not stated	NA	7.5
Total	100.0	100.0
Aborigines: total		
Federal Government	7.3	9.4
State Government	18.7	23.3
Local Government	5.2	6.9
Private sector	68.8	53.5
Not stated	NA	6.9
Total	100.0	100.0
Total population: males		
Federal Government	8.5	8.5
State Government	14.4	14.2
Local Government	2.3	2.7
Private sector	74.8	72.7
Not stated	NA	1.9
Total	100.0	100.0
Total population: females		
Federal Government	5.8	6.5
State Government	16.8	18.0
Local Government	0.8	1.4
Private sector	76.6	71.7
Not stated	NA	2.4
Total	100.0	100.0

Continued over page.

Table 3. Continued.

Industry sector	1976[a]	1986
Total population		
Federal Government	7.6	7.7
State Government	15.3	15.7
Local Government	1.7	2.2
Private sector	75.4	72.3
Not stated	NA	2.1
Total	100.0	100.0

a. The not stated in 1976 were included with the private sector.

Source: Compiled from Australian Bureau of Statistics, 1976 and 1986 Census tabulations.

in its tabulations, but it is also near the point where tax exemption operated in 1986 and a little above the level of many welfare payments at that time.

The data have been split into meaningful categories. For example, individual incomes are shown for household heads ('reference person') and other people aged 15 or more separately, with a further split into men and women. It is very clear that most income earners, other than male household heads, had incomes of less than $9,001, except in the Australian Capital Territory. The median incomes of male household heads range fairly close to the overall median of $12,200, from $10,200 in the Northern Territory to about $15,000 in Victoria and Tasmania, except for the Australian Capital Territory, which had a high median of $20,000. The Australian Capital Territory stands out with higher than usual income levels, the reason being the employment of many Aboriginal people in Australian Public Service; however, the Aboriginal population of this Territory is very small.

Apart from the case of the Australian Capital Territory, the variation between the States evident for individual income levels is less prominent in the case of family incomes. Median incomes for single-parent families by State, are close to the overall median of $9,400, and the only States with median incomes for other types of families far from the overall median are the Northern Territory, at $17,000 well below, and Victoria, at $22,800 well above.

While almost half of single-parent families had incomes less than $9,000, other families seem relatively well-off; only in the Northern Territory did more than 10 per cent of Aboriginal families apart from single-parent families have such low incomes. This is a very interesting finding, because

individual incomes, even of household heads, had been low. It demonstrates that the combination of earnings, and welfare payment contributions from family members which go towards the constitution of family incomes, works effectively in many Aboriginal households to ensure reasonable income levels. The major exception is the case of

Table 4. Incomes of Aboriginal individuals, families and households, by States and Territories and types of income units, 1986 Census.

Individual incomes (persons aged 15+)

	Aboriginal household heads				Other persons			
	Males		Females		Males		Females	
	Median	Per cent <$9000	Median	Per cent <$9000	Median	Per cent <$9000	Median	Per cent <$9000
NSW	12,900	29	<9,001	65	<9,001	68	<9,001	76
Vic	14,900	22	<9,001	62	<9,001	57	<9,001	70
Qld	12,600	27	<9,001	62	<9,001	64	<9,001	78
SA	12,000	34	<9,001	65	<9,001	69	<9,001	75
WA	10,444	42	<9,001	66	<9,001	74	<9,001	80
Tas	15,200	20	<9,001	68	<9,001	58	<9,001	76
NT	10,200	44	<9,001	56	<9,001	70	<9,001	77
ACT	20,000	9	9,800	47	10,800	43	<9,001	52
Australia	12,200	32	<9,001	63	<9,001	67	<9,001	77
No. of persons	21,329		15,375		45,091		55,339	

Family incomes

	Type of family					
	Single parent		Other		All families	
	Median	Per cent <$9000	Median	Per cent <$9000	Median	Per cent <$9000
NSW	9,300	49	20,000	6	16,700	17
Vic	9,300	49	22,800	5	19,200	15
Qld	10,000	46	20,000	7	16,800	17
SA	<9,001	51	19,200	7	15,900	20
WA	9,100	50	18,700	9	14,900	21
Tas	<9,001	56	20,800	5	19,000	12
NT	9,600	47	17,000	11	14,600	20
ACT	12,200	34	32,400	4	28,200	9
Australia	9,400	48	19,700	7	16,400	18
No. of families	13399		40735		54134	

Continued over page.

Table 4. Continued.

Household incomes

	Type of household 1 family		2+ families		Lone persons	
	Median	Per cent <$9000	Median	Per cent <$9000	Median	Per cemt <$9000
NSW	18,600	12	28,700	1	<9,001	56
Vic	20,900	11	30,300	-	10,100	46
Qld	18,900	11	33,300	3	<9,001	50
SA	18,100	14	29,400	3	<9,001	58
WA	18,500	12	31,400	2	<9,001	63
Tas	19,800	9	27,400	-	<9,001	58
NT	19,200	11	36,400	1	<9,001	56
ACT	30,500	6	>40,000	-	15,900	26
Australia	19,000	12	32,000	2	<9,001	54
No. of households	41,923		5,402		4,207	

Source: Compiled from Australian Bureau of Statistics, 1986 Census tabulations.

single-parent families, which have median incomes well below other families: in all States except the Northern Territory the median income for single-parent families is half or less the median income of other families.

The pattern found suggests levelling of family income levels through contributions from different members of families. This levelling effect is evident again at the level of household incomes, median values of which are close to the overall median level for one-family households in all States except the Australian Capital Territory. However, for multi-family households there is considerable variation between the States. Lone-person households generally have very low incomes.

This analysis shows in a very clear way that poverty (as measured by low incomes) is associated more with particular family and household structures than with geographical location by States.

While many Aboriginal people live in areas where non-Aboriginal people are in the majority, there are some localities where the Aboriginal component forms a substantial or a major part of the population. It is informative to investigate economic status of Aborigines where they form a minority or a majority population in the localities in which they live. This topic is investigated for census Collector Districts (CDs) with 10 per cent or more Aboriginal population, a total of 755 CDs in all, Australia-wide. The relative share of Aboriginal population in the CDs is related to

the index of economic resources for these areas constructed by the Australian Bureau of Statistics on the basis of the 1986 Census (Australian Bureau of Statistics 1990a). The index of economic resources looks at economic indicators of well-being by considering variables such as income, rent, house size and number of cars at each house to produce a single aggregate index number for a small area. The results displayed graphically in Figure 11 clearly show that Aboriginal economic status is lower where they form the larger share of the total population of an area. Aborigines in CDs with an index of economic resources above the median for all CDs in Australia, which is a little less than 1000, were rare and these were mainly CDs with 10 to 20 per cent Aborigines. Except for some outliers, most CDs with 40 per cent or more Aboriginal people fell below the tenth percentile for all CDs.

This analysis suggests a massive level of socioeconomic disadvantage compared with other Australians for a large proportion of the Aboriginal population, and the disadvantage is increasingly worse in areas where there are more Aborigines. Of course, this finding corresponds also with the geographic reality that very many of the CDs clustered in the bottom right of the graph are remote rural localities. Yet it is also clear that most of the CDs shown in this display lie below the tenth percentile for all

Figure 11. Relationship between Index of Economic Resources and percentage of Aboriginal and Torres Strait Islanders in 1986 Census Collection Districts.

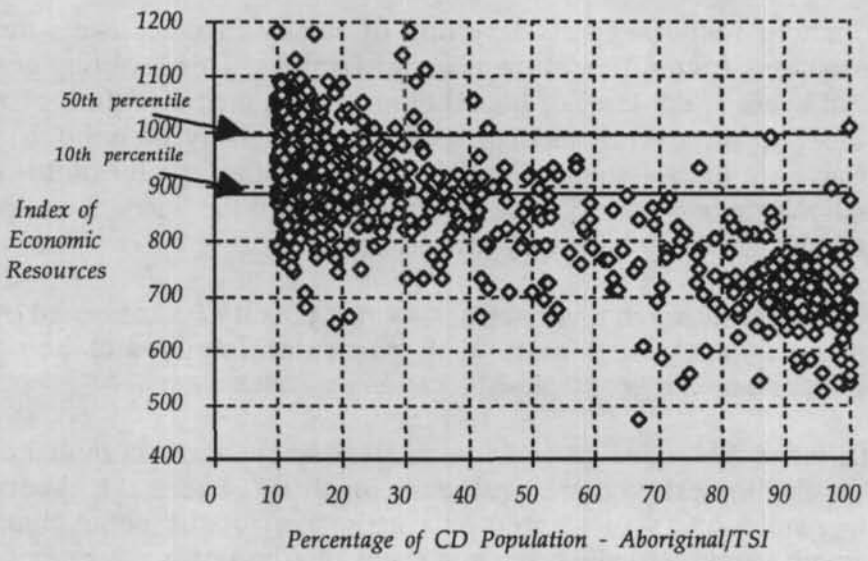
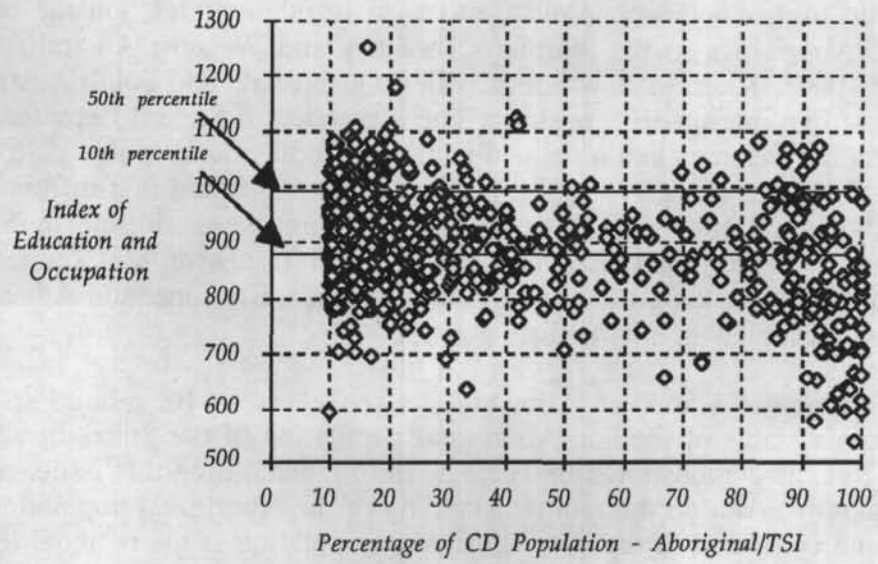


Figure 12. Relationship between Index of Education and Occupation and percentage of Aboriginal and Torres Strait Islanders in the 1986 Census Collection Districts.



areas in Australia, or in other words that if CDs in the 0-10 range were included, 90 per cent of them would have been located above the 10th percentile line. It therefore appears that at every level of Aboriginal population density, at least above ten per cent of a small area, Aborigines tend to live in relatively disadvantaged areas.

The same analysis was carried out for a similar index of education and occupation, as shown in Figure 12. This index provides rankings for CDs based on variables related to educational background and type of occupation. The pattern of decreasing status as a function of the relative size of Aborigines for this index is not quite as strong as for the index of economic resources, though the relationship generally holds, but it is also clear in the case of this index that there are few CDs with substantial Aboriginal population components that achieve index scores above the 50th percentile, and again there are very many which have scores far below the 10th percentile for all CD areas in Australia.

There could be no clearer summary of the comparative disadvantage experienced by many Aboriginal and substantially-Aboriginal communities than these two summary indexes. They show absolutely that Aboriginal socioeconomic status is inversely related to the relative size of Aborigines of the total population of localities in which they live. It has been also shown that location affects Aboriginal socioeconomic status (Tesfaghiorghis 1991; Altman and Nieuwenhuysen 1979; Fisk 1985).

Aborigines resident in major urban and other urban areas were generally better off than their rural counterparts, and those of major urban areas were better off than those of other urban areas. There are also considerable State variations in Aboriginal economic status. Overall, Aborigines in the Australian Capital Territory, Tasmania and Victoria showed higher socioeconomic status than in other States. On the other hand, Aborigines in the Northern Territory and Western Australia had lower status. Those in New South Wales, Queensland and South Australia occupied an intermediate position. These patterns of State differentials in Aboriginal incomes had remained similar to those found in the 1976 and 1981 Censuses (Fisk 1985: 57-9). Fisk (1985: 59) found that differences in Aboriginal incomes between capital cities were similar to State differences. Aboriginal incomes were highest in Canberra, Melbourne and Hobart, in descending order, and lowest in Perth, Brisbane, and Adelaide. Sydney occupied an intermediate position.

The economic status of Aborigines also seems to be related to the economic status of the non-Aboriginal population of the States in which they live, as demonstrated in Table 5. Before examining this issue, some comparative data on the relative standing of the Aboriginal population as a whole compared to the non-Aboriginal population at the national level, as for 1986, may be instructive. The percentage of population aged 15 years and over with certificate or higher educational qualification was 6 per cent for Aborigines and 26 per cent for non-Aboriginal Australians. Aborigines leave school at young ages. The percentages of persons aged 15-19 years still attending school were 27 per cent for Aborigines and 43 per cent for other Australians. The percentage of employed non-Aboriginal Australians was nearly twice that of Aborigines, 63 per cent compared to 33 per cent. Median Aboriginal individual annual income was about two-thirds that of non-Aboriginal people, $6,210 compared to $9,660. The share of total population that consisted of children under 15 years of age was 40 per cent for Aborigines and 23 per cent for non-Aboriginal Australians. The average household size was 4.4 persons for Aborigines and 2.8 for non-Aborigines.

An examination of educational qualifications over time shows some improvements. The percentage of Aborigines with some form of qualification has increased from 2.4 per cent of the population aged 15 years and over in 1971 to 9.0 per cent in 1986. For the total population, the increase has been from 20.4 per cent to 30.1 per cent.

These wide disparities between the two populations should be borne in mind when assessing the economic status of Aborigines in relation to the status of the non-Aboriginal population of the States in which they live. The economic status of Aborigines in general seems to be related to the status of the non-Aborigines. The data in Table 5 show that the Australian

Table 5. Comparisons of selected indicators between Aboriginal and non-Aboriginal population by State: 1986 Census.

Non-Aboriginal Population

State	Percent employed[a]	Percent unemployed[a]	Labour force (%)	Median individual income	Income ratio State/Aust.[b]
NSW	61.7	6.8	68.5	9,650	99.9
Vic	63.9	4.8	68.7	10,210	105.7
Qld	60.7	7.4	68.1	8,780	90.9
SA	63.1	6.6	69.7	8,820	91.3
WA	63.9	6.3	70.2	9,720	100.6
Tas	61.0	6.7	67.7	8,650	89.5
NT	68.4	5.7	74.1	15,270	158.1
ACT	72.4	3.5	75.9	15,470	160.1
Australia	62.6	6.2	68.8	9,660	100.0

Aboriginal Population

State	Percent employed[a]	Percent unemployed[a]	Labour force(%)	Median individual income	Income ratio Ab./non-Ab.[c]
NSW	32.4	21.7	54.1	6,310	65.4
VIC	44.6	14.1	58.7	7,620	74.6
QLD	34.3	17.7	52.0	6,270	71.4
SA	34.2	18.1	52.3	6,270	71.1
WA	27.5	17.5	45.0	5,830	60.0
TAS	49.1	13.2	62.3	7,540	87.2
NT	26.0	14.0	40.0	5,920	38.8
ACT	59.3	9.9	69.2	12,340	79.8
Australia	32.6	17.8	50.4	6,210	64.3

a. Percentage employed and unemployed refer respectively to the number employed and unemployed aged 15-64 years out of population aged 15-64 years, and the labour force is the sum of these two categories.
b. Income ratio State/Aust. is the ratio of non-Aboriginal State individual annual incomes to overall Australia income, Australia equals 100.0; and
c.Income ratio Ab./non-Ab. is the ratio of Aboriginal to non-Aboriginal median annual income expressed as a percentage.

Source: Compiled from Australian Bureau of Statistics, 1986 Census tabulations.

Capital Territory and Victoria, which are identified as the areas of higher Aboriginal economic status, also have higher employment, lower unemployment and higher individual income for the non-Aboriginal population than in any States. There are, however, two exceptions to this.

The Northern Territory which had the highest non-Aboriginal incomes and employment (comparable only to the Australian Capital Territory) is not reflected in corresponding status for the Aborigines of the Territory. In contrast, Tasmania which only fared average on the indicators for non-Aborigines is one of the States (along with the Australian Capital Territory and Victoria) where Aborigines had more economic equality. The ratio of Aboriginal individual median annual incomes to that of non-Aborigines ranged from a relatively low ratio of 39 per cent in the Northern Territory to 60 per cent in Western Australia, and 65 per cent in New South Wales, and to a relatively high level of 75 per cent in Victoria, 80 per cent in the Australian Capital Territory, and 87 per cent in Tasmania. In Queensland and South Australia, this ratio was 71 per cent.

Other social indicators not shown in Table 5 indicate similar patterns of Aboriginal disadvantages by State. For instance, the percentage of persons aged 15-19 years still at school was 20 per cent for Aborigines and 36 per cent for non-Aborigines in Western Australia; 23 per cent for Aborigines and 38 per cent for non-Aborigines in the Northern Territory; 26 per cent for Aborigines and 39 per cent for non-Aborigines in South Australia. In four States, Victoria, Tasmania, Queensland and New South Wales, this figure was 29-30 per cent for Aborigines and between 34 to 47 per cent for the non-Aborigines. In the Australian Capital Territory, it was 32 per cent for Aborigines and 52 per cent for non-Aborigines. In terms of education, Aborigines in New South Wales fared better, but performed below the average according to economic indicators. As the indicators in Table 5 show, the State differences in Aboriginal status cannot be only related to employment opportunities and integration of the Aborigines into the formal labour market, but also due to Federal and State policies that influence their social and economic position.

Discussion

This paper takes a view of the population of Aborigines and Torres Strait Islanders in Australia which emphasises the impact of structural changes on social indicators. For the most part, we have avoided presenting information that is readily obtainable from other sources, except in the form of graphical presentations to show trends, and we have concentrated on what are key indicators by implication from the consequences of change in population structure. These key indicators are the ones affecting young adults and people in middle adulthood.

At the outset, we pointed out that the types of indicators which we would present were closely related to the paper's perspective. To some extent, a perspective of population dynamics avoids the consequences of comparative analyses which imply that Aboriginal people necessarily want

to achieve equality with non-Aboriginal Australians in terms of key indicators. Yet it is very difficult to discuss any type of indicator without points of reference, and it has been desirable to include such points of reference in the discussion.

It is common to find that discussions of Aboriginal social statistics and demographic statistics contain frequent references to inadequacies of data coverage and deficiencies in information available to arrive at meaningful conclusions. This attitude has excellent antecedents, in that until within the last 10 years it was difficult to present useful data even about very basic aspects of the situation of Aborigines and Torres Strait Islanders in this country, and there were many substantial calls for improvement of data sources (see National Population Inquiry 1975). Certainly, it would have been impossible in the past to adopt the analytical perspective presented here, based on a window of Aboriginal population change. It would have been just as difficult for an official statistical agency such as the Australian Bureau of Statistics to produce a quality production of official data such as its recent set of social statistics about the Aboriginal population of the Northern Territory (Australian Bureau of Statistics, 1990b).

Yet, as we have shown in this paper, it is now possible to discuss indicators of social change for the Aboriginal population within a meaningful explanatory framework and to arrive at some definite conclusions. We do not believe it is helpful to continue to claim that data inadequacies hinder capacity to arrive at directions for policy and programs. Such a view, moreover, would ignore the large amount of effort that has been directed towards the improvement of official data sources, especially during the past ten years. The Australian Bureau of Statistics has put increasing effort into improvement of census enumeration of Aboriginal people, and has begun to publish a substantial number of collations of data about Aborigines and Torres Strait Islanders; the creation of an Aboriginal Statistics Unit in the Bureau in 1985 was overdue recognition of the importance of the topic. The statistical staff of the Department of Aboriginal Affairs, now subsumed into the Aboriginal and Torres Strait Islander Commission, have since 1974 pursued a program of improvement, analysis and publication of official data. And agencies in the health field have also contributed substantially.

If it is possible to be positive about the achievements that have been made in improving sources of official data, it is also helpful if those areas in which information gaps are still prevalent should be identified. In doing this, we also need to acknowledge that current data sources continue to have problems of coverage and interpretation. These problems can in many instances be overcome by careful analytical methods, and we regard undue focus on their severity as a hindrance to statistical development; moreover, it is essential to point out that lack of precision in measurement

and interpretation is often a result of the fuzzy nature of boundaries between what is Aboriginal and non-Aboriginal in Australia.

In terms of the analytical approach which has been taken in this paper, the most serious data deficiency in prospect is the result of an informed decision by the Australian Bureau of Statistics to drop the census questions on children ever born and children surviving from the 1991 Census. These questions have been extraordinarily useful in developing our knowledge about demographic trends in the population of Aborigines and Torres Strait Islanders; for instance, it was analysis of these data that identified the fertility decline which had occurred in the Aboriginal population during the 1970s (Gray 1983). As we are now entering a period of uncertainty about trends in Aboriginal fertility levels, and assessment of fertility prospects is so important in the process of population projection, it is of great importance that fertility levels can be assessed regularly.

The prospects for assessment of fertility trends from other sources of data are, in the short term, not good. This paper includes some discussion about apparent deficiencies in births data derived from official collections in the States and Territories, and about only some of the problems associated with the 'own-children' estimates produced by Jain (1989). While it is too late to restore the questions to the 1991 Census, it is very important that they be restored to future censuses. Because of the way in which these data are used in fertility analysis, they must be available from successive censuses to be exploited fully, so that even if restored in 1996 they will not regain their full utility until the 2001 Census. It is therefore very important that other sources of data be developed rapidly to make fertility analysis feasible in the next decade.

One attractive way to obtain relevant data, not only about birth rates but a large range of other social, economic and health characteristics is through a special survey of the Aboriginal population. Such a survey is now under consideration by the Australian Bureau of Statistics, which has invited submissions from a small number of official agencies. There are several observations which should be made about a survey of this nature. The first relates to its feasibility and methods of data collection. The type of information presented in this paper about the geographical clustering of the population of Aborigines and Torres Strait Islanders suggests an obvious sampling strategy, namely sampling of Census Collection Districts, with probability proportional to size (PPS) of Aboriginal population, to produce a relatively inexpensive sampling framework for a national sample and unbiased PPS estimates of characteristics of the Aboriginal population at a national level. The point of this observation is not just methodological; it is of critical importance to conduct such a survey as soon as possible after the relevant data from the 1991 Census

are available, in order to avoid the possibility that the population distribution changes substantially from the base data.

A second observation about such a survey concerns the potential value it has for investigating aspects of Aboriginal health through incorporation of elements of health surveys aimed specifically at testing hypotheses about the relationship between the social roles of individuals and health status. In a wider sense, investigation of the social and economic characteristics of Aboriginal people can be addressed within a theoretical framework of examining the interactions between Aborigines and societal institutions.

It is a truism that the way in which perceptions are generated through the analysis of summary social indicator data is related to the choice of data to be presented. We are conscious of this and conscious of having made choices in this paper, but we are able to point out in justification that our choices were motivated by our analytical framework of dynamic population change. Choices of indicators, once made, often lead to the adoption of policies and programs which aim in the first instance to obtain favourable values for the indicator statistics rather than to resolve the social issues about which they are meant to provide indicative information. This happened in the way in which measures aimed at reducing Aboriginal infant and maternal mortality rates were adopted in Australia, although these measures were also accompanied by the adoption of inexpensive and highly beneficial primary health care programs. Possibly inadvertently, it is also happening at present in the rapid promulgation of the Community Development Employment Projects scheme in Aboriginal communities throughout Australia. This program replaces unemployment benefits in a community which requests the scheme with equivalent amounts paid to the community to create jobs for community members, and has the effect of reducing unemployment without any attention to its local economic causes. In this paper we have used unemployment rates as an indicator, even though we are aware that already in the 1986 Census data there were a number of Aboriginal communities with zero or close-to-zero unemployment recorded, only because of these make-work schemes.

Notes

1. This differs from the population enumerated at the 1981 Census by a considerable amount. The population levels shown here are those that are compatible with the level of enumeration in the 1986 Census, and identified mortality and fertility levels.

2. It should be noted that the high figure of 3.5 shown for Western Australia for 1988 is consistent with estimates for the first half of the 1980s from the same source. It is possible that the problem is due to underenumeration in successive censuses and consequent use of denominators that are too low in calculating these rates.

3. An 'Aboriginal household' for this purpose is a household in which the so-called 'reference person' (meaning household head) is Aboriginal or a Torres Strait Islander. The age-sex-specific headship rates are derived by relating the number of Aboriginal household heads of a given age and sex to the size of the Aboriginal population of the same age and sex. Estimates of numbers of families are derived by using a fixed factor relating the number of Aboriginal families in 1986 to the number of Aboriginal households defined in this way: there are approximately three families to every two households.

4. Analysis in a paper for a conference on Aboriginal housing policy for the Aboriginal Development Commission (Gray 1989b) suggests that provision through Aboriginal housing programs in the twenty-year period since they commenced had barely kept pace with new demand and made little impact on backlogs.

References

Altman, J.C. and Nieuwenhuysen, J. 1979. *The Economic Status of Australian Aborigines*. Cambridge: Cambridge University Press.

Australian Bureau of Statistics 1987. *Aboriginals and Torres Strait Islanders: Australia, States and Territories*, Cat. No. 2499.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics 1990a. *Socio-Economic Indexes for Areas*, Cat. No. 1356.0. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics 1990b. *Aboriginal People in the Northern Territory*, Cat. No. 4107.7. Darwin: Australian Bureau of Statistics.

Australian Institute of Health 1988. 'Aboriginal health - a case study', in *Australia's Health: the First Biennial Report by the Australian Institute of Health*. Canberra: Australian Government Publishing Service.

Choi, C.Y. and Gray, A. 1985. *An Evaluation of Census Counts of the Aboriginal Population, 1971, 1976 and 1981 Censuses*, Occasional Paper No. 1985/2. Canberra: Australian Bureau of Statistics.

Department of Aboriginal Affairs 1981. Report of a Review of the Administration of the Working Definition of Aboriginal and Torres Strait Islander, unpublished report to the Constitution Section, Department of Aboriginal Affairs, Canberra.

Devanesen, D. Furber, M., Hampton, D., Honari, M., Kinmonth, N. and Peach, H.G. 1986. *Health Indicators in the Northern Territory*. Darwin: Northern Territory Department of Health.

Fisk, E.K. 1985. *The Aboriginal Economy in Town and Country*. Sydney: George Allen & Unwin.

Gray, A. 1983. 'Australian Aboriginal Fertility in Decline', unpublished PhD thesis, Australian National University, Canberra.

Gray, A. 1989a. 'Aboriginal migration to the cities', *Journal of the Australian Population Association*, 6 (2): 122-44.

Gray, A. 1989b. '20 years of Aboriginal housing', unpublished paper presented to the Aboriginal Housing Policy Conference, Alice Springs, 21-22 March 1989.

Gray, A. 1990a. 'Aboriginal fertility: trends and prospects', *Journal of the Australian Population Association*, 7 (1): 57-77.

Gray, A. 1990b. 'National estimates of Aboriginal mortality', in A Gray (ed.) *A Matter of Life and Death: Contemporary Aboriginal Mortality*. Canberra: Aboriginal Studies Press.

Gray, A. and Hogg, R. 1989. *Mortality of Aboriginal Australians in Western New South Wales 1984-1987*. Sydney: New South Wales Department of Health.

Hicks, D.G. 1985. Aboriginal Mortality Rates in Western Australia, 1983, unpublished Master of Public Health treatise, University of Sydney, Sydney.

Jain, S.K. 1989. *Estimation of Aboriginal Fertility, 1971-86: An Application of the Own-Children Method of Fertility Estimation*, Occasional Paper. Canberra: Australian Bureau of Statistics.

Jordan, D.F. 1985. 'Census categories - enumeration of Aboriginal people, or construction of identity', *Australian Aboriginal Studies*, 1: 28-36.

Khalidi, N.A. 1989. The Aboriginal Population of Alice Springs: A Demographic Study', unpublished PhD thesis, Australian National University, Canberra.

Lee, S-H., Smith, L., d'Espaignet, E. and Thomson, N. 1987. *Health Differentials for Working Age Australians*. Canberra: Australian Institute of Health.

National Aboriginal Health Strategy Working Party 1989. *A National Aboriginal Health Strategy*. Canberra: Department of Community Services and Health.

National Population Inquiry 1975. *Population and Australia: A Demographic Analysis and Projection*, first report of the National Population Inquiry, 2 vols. Canberra: Australian Government Publishing Service.

Plant, A.J. 1988. Aboriginal Mortality in the Northern Territory, 1979-83, unpublished Master of Public Health treatise, University of Sydney.

Smith, L.R. 1980. *The Aboriginal Population of Australia*, Canberra: Australian National University Press.

Tesfaghiorghis, H. 1991. *Geographic Variations in the Economic Status of Aboriginal People: A Preliminary Investigation*, CAEPR Discussion Paper No 2. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.

Thomson, N. 1990. 'Overview of Aboriginal health status - New South Wales', unpublished paper prepared for the Royal Commission into Aboriginal Deaths in Custody.

CENTRE FOR ABORIGINAL ECONOMIC POLICY RESEARCH (CAEPR) DISCUSSION PAPERS:

1. 'From exclusion to dependence: Aborigines and the welfare state in Australia' by J.C. Altman and W. Sanders (March 1991).

2. 'Geographic variations in the economic status of Aboriginal people: a preliminary investigation' by H. Tesfaghiorghis (March 1991).

3. 'Aboriginal socio-economic status: are there any evident changes?' by H. Tesfaghiorghis and J.C. Altman (March 1991).

4. 'Indigenous economic development in the Torres Strait: possibilities and limitations' by W.S. Arthur (March 1991).

5. 'The CDEP scheme: administrative and policy issues' by J.C. Altman and W. Sanders (September 1991).

6. 'The participation of Aboriginal people in the Australian labour market' by A.E. Daly (September 1991).

7. 'The impact of welfare on the economic status of Aboriginal women' by A.E. Daly (September 1991).

8. 'Geographic location and Aboriginal economic status: a census-based analysis of outstations in the Northern Territory' by J. Taylor (September 1991).

9. 'Aboriginal expenditure patterns: an analysis of empirical data and its policy implications' by D.E. Smith (September 1991).

10. 'Toward an Aboriginal household expenditure survey: conceptual, methodological and cultural considerations' by D.E. Smith (September 1991).

11. 'Aboriginal economic status by ATSIC regions: analyses of 1986 Census data' by H. Tesfaghiorghis (October 1991).

12. 'Appropriate income support for Aboriginal Australians: options for the 1990s' by J.C. Altman (October 1991).

13. 'Aboriginal unemployment statistics: policy implications of the divergence between official and case study data' by D.E. Smith (October 1991).

14. 'Living off the land in national parks: issues for Aboriginal Australians' by J.C. Altman and L.M. Allen (October 1991).

15. 'Funding allocations to Aboriginal people: the Western Australia case' by W.S. Arthur (December 1991).

16. 'The employment of Aboriginal Australians in the labour market' by A.E. Daly (December 1991).

17. 'Spatial mobility of working age Aborigines in settled and remote Australia: a preliminary analysis by J. Taylor (December 1991).

18. 'Social indicators of the Aboriginal population of Australia' by A. Gray and H. Tesfaghiorghis (December 1991).