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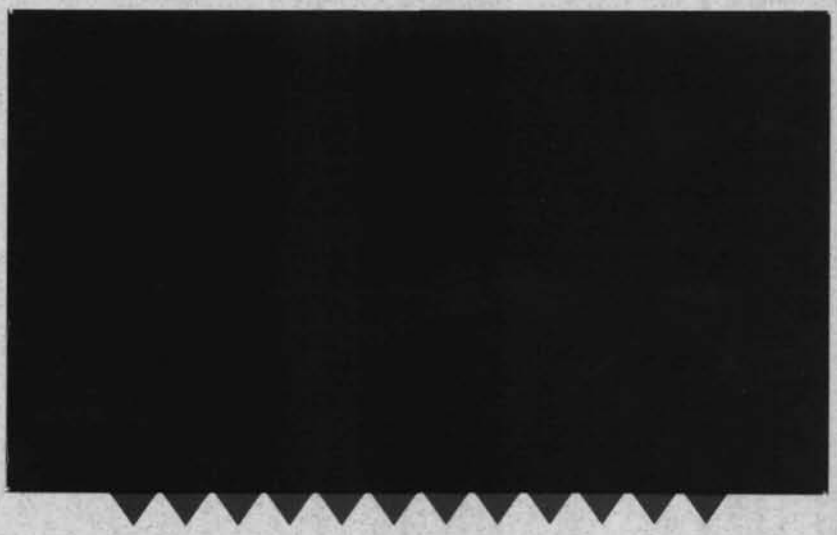

Change in Aboriginal and Torres Strait Islander population distribution, 1986-91

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ABSTRACT

Reliable estimation of Aboriginal and Torres Strait Islander population growth rates has not been possible with past census data. Because substantial advancement in census field procedures and improvement in coverage of Aboriginal and Torres Strait Islander communities has been achieved over the years, there was hope that the 1986-91 interval would yield reasonably accurate population growth rates. However, population figures now available from the 1991 Census show that this is not the case. There are variations in Aboriginal and Torres Strait Islander growth rates across the States and Territories, most of which cannot be justified in terms of intercensal natural increase and net migration during the intercensal period. The Aboriginal and Torres Strait Islander population increased at a rate of 3 per cent per year during the intercensal period 1986-91, whereas the expected growth rate was 2.5 per cent. While the Aboriginal population increased at a rate of 2.9 per cent, the Torres Strait Islander growth rate was 4.3 per cent. The data also show higher concentrations of Aboriginal and Torres Strait Islander populations in metropolitan areas, but this has mainly occurred as a result of the reclassification of Townsville-Thuringowa locality from other urban to major urban.

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Discussions on census data for the Aboriginal and Torres Strait Islander populations highlight major problems which lower data quality. One concerns the statistical definition of the Aboriginal and Torres Strait Islander populations which is based on 'descent and self-identification'; population numbers can alter according to changes in propensity to identify as Aboriginal or Torres Strait Islander (Smith 1980; Australian Bureau of Statistics (ABS) 1989; Choi and Gray 1985). Another problem is the undercount of people. The marginal circumstances in which some Aboriginal and Torres Strait Islander people live make them more vulnerable to being missed by census enumeration (Hugo 1990). However, coverage problems in remote regions of Australia have increasingly been minimised over time with improved census field procedures and with greater community participation: some of the measures undertaken in the Northern Territory have been outlined by Loveday and Wade-Marshall (1985) and more recently by Taylor (1993).

As a result of such measures, the 1986 Census was thought to provide better quality data on the Aboriginal and Torres Strait Islander populations than previous censuses. Accordingly, it could then be used as a baseline for the study of trends in population and socioeconomic characteristics. This view was expressed in submissions made to the Royal Commission into Aboriginal Deaths in Custody (Commonwealth of Australia 1991). Preliminary counts from the 1991 Census released in July 1992 indicated (ABS 1992) that overall Aboriginal and Torres Strait Islander population growth was consistent with expectations (Gaminiratne 1992; Gray and Tesfaghiorghis forthcoming). Detailed data now available from the 1991 Census that has been corrected for internal inconsistencies and misreading by the Optical Mark Reader, however, show that the Aboriginal and Torres Strait Islander population increased at an average rate of 3 per cent per year. This rate is higher than expected, given past trends. Thus, the assessment of trends has become a problem and has, once again, raised questions about the true size of the Aboriginal and Torres Strait Islander population. Using data from the 1991 Census, this paper assesses growth and changes in the distribution of the Aboriginal and Torres Strait Islander populations by State and section-of-State and draws attention to areas where growth rates are anomalous.[1]

Growth of the Aboriginal and Torres Strait Islander populations, 1986-91

In the 1991 Census a total of 238,574 persons identified as Aboriginal and 26,891 persons as Torres Strait Islander (Table 1). Between 1986 and 1991 the Aboriginal and Torres Strait Islander population, as a whole, increased at an average rate of 3 per cent per year from 227,645 in 1986 to 265,465 in 1991. Disaggregating the observed growth rates into their constituent

parts, the Aboriginal population increased at a rate of 2.9 per cent per year while the Torres Strait Islander population increased at a rate of 4.3 per cent per year. The observed intercensal rate of population growth for Torres Strait Islanders is thus about one and half times the Aboriginal growth rate and is very high by any demographic standards. If the Aboriginal and Torres Strait Islander populations continue to grow at these rates in future, their numbers will double in 24 years for Aborigines and in about 16 years for Torres Strait Islanders.

Table 1. Distribution of Aboriginal and Torres Strait Islander populations in States by sex, 1986-91.

State/ Territory	Aborigines		Torres Strait Islanders		Total	
	1986	1991	1986	1991	1986	1991
Total						
NSW	55,672	65,133	3,337	4,886	59,009	70,019
Vic.	10,740	13,739	1,871	2,996	12,611	16,735
Qld	48,095	55,475	13,171	14,649	61,266	70,124
SA	13,298	14,639	993	1,593	14,291	16,232
WA	37,111	41,002	680	775	37,791	41,777
Tas.	5,830	7,620	888	1,265	6,715	8,885
NT	34,194	39,287	540	624	34,734	39,911
ACT	1,164	1,679	61	103	1,225	1,782
Total	206,104	238,574	21,541	26,891	227,645	265,465
Males						
NSW	27,631	32,225	1,636	2,435	29,267	34,660
Vic.	5,252	6,768	940	1,470	6,192	8,238
Qld	24,044	27,519	6,418	7,251	30,460	34,770
SA	6,478	7,150	476	769	6,955	7,919
WA	18,473	20,452	393	419	18,866	20,871
Tas.	2,955	3,847	433	640	3,391	4,487
NT	16,629	19,275	285	330	16,916	19,605
ACT	580	844	30	49	608	893
Total	102,041	118,080	10,614	13,363	112,655	131,443
Females						
NSW	28,041	32,908	1,701	2,451	29,742	35,359
Vic.	5,488	6,971	931	1,526	6,419	8,497
Qld	24,051	27,956	6,753	7,398	30,804	35,354
SA	6,820	7,489	517	824	7,337	8,313
WA	18,638	20,550	287	356	18,925	20,906
Tas.	2,875	3,773	452	625	3,326	4,398
NT	17,565	20,012	255	294	17,820	20,306
ACT	586	835	31	54	617	889
Total	104,063	120,494	10,927	13,528	114,990	134,022

Source: 1986 data are based on randomised tables (microfiche table number CA0029), thus subtotals may not add up to the totals shown in the table; unpublished 1991 Census data (ABSTAT 001).

Growth and distribution by State and Territory

The intercensal growth rates of the Aboriginal and Torres Strait Islander populations vary between States and Territories ranging from 2 per cent per year in Western Australia to 7.3 per cent in the Australian Capital Territory. Intercensal growth rates observed in the Australian Capital Territory were about two and half times the overall growth of 3 per cent recorded for the total Aboriginal and Torres Strait Islander population. The high growth rate in the Australian Capital Territory partly reflects its low base and is associated with the growth of public sector employment. Tasmania, Victoria and New South Wales also recorded relatively high growth rates. Tasmania and Victoria each experienced growth rates of about 1.8 times the national average. In contrast, the Aboriginal and Torres Strait Islander populations in Western Australia, the Northern Territory, South Australia and Queensland experienced growth rates well below the national average. In all States, except Queensland, the observed growth rates are much higher for Torres Strait Islanders than for Aborigines (Table 2).

Table 2. Intercensal growth rates and relative growth rates of the Aboriginal and Torres Strait Islander populations by State, 1986-91.

	Aborigines		Torres Strait Islanders		Total	
	Growth rate[a]	Relative growth[b]	Growth rate[a]	Relative growth[b]	Growth rate[a]	Relative growth[b]
NSW	3.1	107	7.5	174	3.4	113
Vic.	4.8	166	9.2	214	5.5	183
Qld	2.8	97	2.1	49	2.6	87
SA	1.9	66	9.3	216	2.5	83
WA	2.0	69	2.6	60	2.0	67
Tas.	5.2	179	6.9	160	5.5	183
NT	2.7	93	2.8	65	2.7	90
ACT	7.2	248	10.3	240	7.3	243
Australia	2.9	100	4.3	100	3.0	100

a. Growth rate per year.
b. Expressed as a ratio of State or Territory growth to national growth.

Table 3. Percentage distribution of the Aboriginal and Torres Strait Islander populations by State, 1986-91.

State	Aborigines		Torres Strait Islanders		Total	
	1986	1991	1986	1991	1986	1991
NSW	27.0	27.3	15.5	18.2	25.9	26.4
Vic.	5.2	5.8	8.7	11.1	5.5	6.3
Qld	23.3	23.3	61.1	54.5	26.9	26.4
SA	6.5	6.1	4.6	5.9	6.3	6.1
WA	18.0	17.2	3.2	2.9	16.6	15.7
Tas.	2.8	3.2	4.1	4.7	3.0	3.3
NT	16.6	16.5	2.5	2.3	15.3	15.0
ACT	0.6	0.7	0.3	0.4	0.5	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

The spatial distribution of the Aboriginal and Torres Strait Islander populations has changed only slightly during the intercensal period. The percentage share of persons living in New South Wales, Victoria, Tasmania and the Australian Capital Territory increased slightly from 35.6 per cent in 1986 to 37 per cent in 1991. In contrast, the share of the Aboriginal population in Western Australia, the Northern Territory and South Australia declined from 41.1 per cent to 39.8 per cent during the same period (Table 3). Queensland also experienced a slight decline. Torres Strait Islanders demonstrated similar, but more substantial, changes in their population distribution in the States. In 1986, about two-thirds of persons who identified as Torres Strait Islander lived in Queensland; in 1991 this percentage declined to 54 per cent. At the same time their share in all other eastern States increased from 28.6 per cent in 1986 to 34.4 per cent in 1991.

Intercensal migration

Distributional changes among both the Aboriginal and Torres Strait Islander populations tend to imply population shifts possibly from Western Australia, the Northern Territory, South Australia and Queensland to Victoria, Tasmania, New South Wales and the Australian Capital Territory. However, the available data on intercensal migration presented in Table 4 do not support such a hypothesis. Migration data presented in Table 4, however, have been derived from responses to the 1991 Census question:

> What was each person's usual address five years ago (at 6 August 1986)?

Table 4. Estimates of intercensal internal migration: Aborigines and Torres Strait Islanders, 1986-91.

State	Inmigration	Outmigration	Net migration
New South Wales	2,196	3,103	-907
Victoria	1,376	1,307	69
Queensland	3,009	2,617	392
South Australia	1,177	932	245
Western Australia	1,198	1,131	67
Tasmania	387	405	-18
Northern Territory	1,485	1,573	-88
Australian Capital Territory	595	355	240

Source: ABS 1993 unpublished data.

Table 5. Growth rates of the Aboriginal and Torres Strait Islander population, observed and estimated, by State, 1986-91.

State	Growth rate per year		Net migration (1986-91)[b]	
	Observed	Estimated[a]	Number	Rate
New South Wales and Australian Capital Territory[c]	3.4	2.7	-667[c]	-1.1
Victoria	5.5	3.4	69	0.5
Queensland	2.6	2.5	392	0.7
South Australia	2.5	2.0	245	1.8
Western Australia	2.0	2.5	67	0.2
Tasmania	5.5	3.3	-18	-0.2
Northern Territory	2.7	2.2	-88	-0.3
Australia	3.0	2.5	-	-

a. Estimated by adjusting the 1986 population in each State according to the relative coverage estimates given by Gray and Tesfaghiorghis (forthcoming). Gray and Tesfaghiorghis combined Tasmania with Victoria and growth rates for the two States were computed assuming combined coverage estimates are uniform for the two States.

b. These have been derived by comparing residence five years ago with that at the time of the 1991 Census. Figures presented in the table are for the five-year period (1986-91) and are used here only to illustrate the broad patterns of migration between the states, i.e. whether a particular state is receiving persons from other States or losing them to other States. Rates are expressed per 100 usual resident population aged 5 years and over in 1991.

c. Disaggregated data indicate that the Australian Capital Territory experienced a net inmigration of 240 persons while New South Wales recorded a net outmigration of 907 persons. Thus the estimated growth rate for New South Wales is 2.6 per cent while the observed rate is 3.4 per cent.

There are some obvious problems in estimating migration from responses to this question. The main problem is ability to accurately recall place of residence on 6 August 1986, which is not a day of special significance (the 1986 Census day probably has more relevance). The problem of recall lapses is potentially higher for Aboriginal people whose level of mobility is generally higher than other Australians. However, migration estimates derived from the census can be used to assess the net direction of population movement at the State level. If data derived from the census reflect the broad patterns of net migration, then the high growth rates observed in New South Wales, Tasmania and Victoria cannot be attributed to sizeable inmigration. For instance, New South Wales experienced high growth rates despite net outmigration of Aboriginal and Torres Strait Islanders. The pattern of net outmigration in New South Wales is consistent with that observed in the 1981-86 intercensal period (Gray 1989). Victoria's observed growth rates are high, but recorded net inmigration is insignificant (Tables 4 and 5). Tasmania, on the other hand, experienced a net loss of Aboriginal and Torres Strait Islander people during the period. Variations in intercensal growth rates among the Aboriginal and Torres Strait Islander populations in the States cannot be explained in terms of internal migration during the period.

Growth and natural increase

Information is also needed on intercensal births and deaths for meaningful assessment of population trends. To date, Aboriginal and Torres Strait Islander births are not identified on a national basis and even in States where they are identified, their coverage is less than satisfactory (Gaminiratne and Tesfaghiorghis 1992). In the absence of data on births and deaths, for direct estimation of intercensal fertility and mortality in the States, Gray and Tesfaghiorghis (forthcoming) used indirect techniques to generate fertility and mortality estimates. On this basis they assessed the coverage of the 1986 Census relative to the 1991 Census. Details of the methodology used, together with intercensal estimates of mortality and fertility and relative coverage of the 1986 Census for each State are given in Gray and Tesfaghiorghis (forthcoming). Relative coverage estimates reproduced in Table 6 can be used to adjust the 1986 population in the States. By comparing the adjusted 1986 population figures with the observed population in the 1991 Census, one could estimate the most probable growth rates consistent with the estimated intercensal natural increase and the observed population in the 1991 Census.

Table 6. Estimated completeness of the Aboriginal and Torres Strait Islander population Census count 1986, relative to the 1991 Census, by State.

State/Territory	Relative completeness	
	Male Per cent	Female Per cent
New South Wales and Australian Capital Territory	0.96	0.96
Victoria and Tasmania	0.89	0.88
Queensland	0.99	0.99
South Australia	0.96	0.99
Western Australia	0.96	0.99
Northern Territory	0.97	0.98
Australia	0.97	0.98

Source: Gray and Tesfaghiorghis (forthcoming), Table 6.

Table 7. Aboriginal and Torres Strait Islander population trends in major urban, other urban and rural[a] areas, 1986-91.

	1986	1991	Percentage share 1986	Percentage share 1991	Growth rate per year
Aboriginal and Torres Strait Islander					
Major urban	55,537	70,872	24.4	26.7	4.9
Other urban	95,879	108,589	42.1	40.9	2.4
Rural	76,229	86,002	33.5	32.4	2.4
Total	227,645	265,463	100.0	100.0	3.0
Aborigines					
Major urban	50,227	62,230	24.4	26.1	4.3
Other urban	85,329	98,021	41.4	41.1	2.7
Rural	70,548	78,325	34.3	32.8	2.1
Total	206,104	238,576	100.0	100.0	2.9
Torres Strait Islanders					
Major urban	5,310	8,642	24.7	32.1	9.6
Other urban	10,550	10,568	49.0	39.3	0.0
Rural	5,681	7,677	26.3	28.6	5.9
Total	21,541	26,887	100.0	100.0	4.3

a. Includes other rural and migratory population.

Table 7 provides information on observed and estimated growth rates per year together with estimated migration rates (1986-91) for the intercensal period. The overall observed growth rate of the Aboriginal and Torres Strait Islander population as a whole, is slightly higher than the estimated growth rate. This rate, which is denoted here as the true rate as opposed to the observed rate, is also higher than the projected growth rate of 2 per cent made by Gray and Tesfaghiorghis (1991) using 1986 Aboriginal and Torres Strait Islander population figures. In their projection Gray and Tesfaghiorghis assumed that Aboriginal and Torres Strait Islander fertility, that showed evidence of falling in the 1970s, would continue to fall at a moderate rate in the 1986-91 period. The 1991 Census data showed this was not the case; on the basis of 1991 data Gray and Tesfaghiorghis (forthcoming) observe that the anticipated fertility transition has not occurred, and in several States fertility has even increased during the period.

Intercensal growth rates observed in Victoria, Tasmania and New South Wales (including the Australian Capital Territory) are substantially higher than the true rates of population growth in the intercensal period. While the observed growth rate for Queensland is more or less consistent with the true rate, the observed growth rates in South Australia and the Northern Territory are slightly higher. The lower than expected rate in Western Australia indicates the possibility of an undercount in the 1991 Census. Gray and Tesfaghiorghis (forthcoming) estimate that in Western Australia the 1986 Census count for males was 1.01 times the 1991 Census count. For females, they estimated the 1986 Census count was 1.04 times the 1991 Census count. The more likely reason for this anomaly is an undercount in the 1991 Census relative to the 1986 Census. The possibility that the 1986 Census coverage in Western Australia was superior to that of 1991 is also discussed by Luther, Gaminiratne and Gray (1993). As the impact of intercensal migration on the growth of the Aboriginal and Torres Strait Islander population is negligible, the extreme growth rates over and above the expected rate of intercensal natural increase, observed particularly in Victoria, Tasmania and New South Wales, could be a result of enumeration defects. This could be due to improved coverage in the 1991 Census and/or increases in the tendency for Aborigines and Torres Strait Islanders to identify as such.

Urban-rural growth: overall change

Australian censuses classify population living in localities into four broad categories according to the population size of the locality: localities with a population of 100,000 or more, for statistical purposes, are defined as major urban areas and those with a population of 1,000 to 99,999 are classified as other urban. Populations between 200 and 999 are treated as

rural, while the rest of the localities, together with the migratory population, are classified as other rural. For many analytical purposes the last two categories can be combined as one category: rural. Table 7 presents data on the distribution and average annual growth rates of the Aboriginal and Torres Strait Islander populations in major urban, other urban and rural areas from the 1986 and 1991 Censuses.

A first impression on examination of the data from Table 7 is the rise in the number of Aboriginal and Torres Strait Islander people in major urban areas. In 1986, 55,537 persons of Aboriginal or Torres Strait Islander origin were living in localities with 100,000 or more, people. By 1991 this number had risen to 70,872, increasing at an average rate of 4.8 per cent per year. The percentage share of the Aboriginal and Torres Strait Islander population in major urban areas rose from 24.4 per cent to 26.7 per cent. The proportion of Aborigines and Torres Strait Islanders living in rural areas increased only slightly.

It should be noted that in 1986 there were 12 localities classified as major urban. In 1991 this number rose to 13, as Townsville-Thuringowa in Queensland, with 2,675 Aborigines and 1,132 Torres Strait Islanders, was reclassified from an other urban to major urban area. If the growth rates for major urban areas are calculated on the basis of localities classified as such both in 1986 and 1991, then the major urban area growth rate would be 3.7 per cent; 3.3 for Aborigines and 6.8 per cent for Torres Strait Islanders.

Table 8. Number of localities classified as major urban and other urban by State, 1986 and 1991 Censuses.

State	Number of localities			
	Major urban		Other urban	
	1986	1991	1986	1991
New South Wales	4	4	203	228
Victoria	2	2	137	145
Queensland	2	3	129	155
South Australia	1	1	50	56
Western Australia	1	1	58	66
Tasmania	1	1	32	32
Northern Territory	-	-	10	12
Australian Capital Territory	1	1	-	-
Total	12	13	619	694

If Townsville-Thuringowa had remained classified as an other urban area, the annual growth rate of the Aboriginal and Torres Strait Islander population living in other urban areas would then be 3.1 per cent;[2] the Aboriginal rate would be 3.2 per cent, while the Torres Strait Islander rate would be 2 per cent. Table 8 presents the number of localities in major urban and other urban areas which existed in 1986 and 1991 in the States. While the number of major urban areas increased only in Queensland, in all States except Tasmania, the number of other urban areas increased between the two Censuses.

Table 9 shows the intercensal average annual growth rates for Aborigines and Torres Strait Islanders by section-of-State. The observed growth rates in the section-of-State categories vary widely between Aborigines and Torres Strait Islanders. Despite increases in the number of localities classified as other urban in 1991, growth rates for Aborigines in major urban and rural localities are significantly higher in New South Wales and South Australia. Among Torres Strait Islanders, intercensal growth rates are relatively high in the rural areas of Victoria and major urban areas in South Australia. The net effect of these changes has been to alter the pattern of distribution of total Aborigines and Torres Strait Islanders in these two States in favour of major urban and rural areas (Table 10). Tasmania, where there were no changes in the number of localities classified as major urban and other urban between the two Censuses, shows a modest increase in the share of major urban population and a significant increase in the rural population (Table 10).

In Western Australia, the growth rate of the Aboriginal population in both rural and other urban areas is relatively low, which supports analyses which suggest a possible undercount in the 1991 Census. For Torres Strait Islanders, rural growth has been negative while other urban growth is very low (Table 9). In the Northern Territory, the Aboriginal population in other urban areas increased from 29.9 per cent in 1986 to 33.9 per cent in 1991. This is primarily the result of an increase in the number of localities classified as other urban from 10 to 12, rather than a greater concentration of people in the other urban areas.

Overall, the Torres Strait Islander population shows a different growth pattern: its growth rate in rural areas is about six times that in other urban areas. As stated earlier, the pattern of intercensal growth and the relative distribution of the Aboriginal and Torres Strait Islander populations in major urban and other urban areas in Queensland has been affected by Townsville-Thuringowa being moved to the major urban category. This change in classification has increased the average growth rate of Aborigines in major urban areas by 4.1 per cent per year and the Torres Strait Islander growth rate by 1.4 per cent.

Table 9. Intercensal growth rates of the Aboriginal and Torres Strait Islander populations by section-of-State, 1986-91.

State/Territory	Growth rate per year 1986-91 Aborigines	Torres Strait Islanders	Total
New South Wales			
Major urban	3.8	7.1	4.1
Other urban	2.2	7.3	2.5
Rural	3.7	9.2	4.1
Victoria			
Major urban	3.6	8.1	4.5
Other urban	4.8	9.2	5.3
Rural	9.5	12.6	10.2
Queensland			
Major urban	7.4	13.2	8.2
Other urban	2.4	-3.0	1.1
Rural	0.3	4.9	1.3
South Australia			
Major urban	2.2	10.0	3.2
Other urban	-0.2	8.6	0.3
Rural	3.6	7.8	3.8
Western Australia			
Major urban	2.5	7.5	2.6
Other urban	2.1	0.9	2.1
Rural	1.4	-6.3	1.4
Tasmania			
Major urban	4.9	12.2	5.9
Other urban	3.9	5.8	4.2
Rural	7.7	5.0	7.3
Northern Territory			
Major urban	n.a	n.a	n.a
Other urban	5.2	1.6	5.0
Rural	1.6	9.4	1.6
Australian Capital Territory			
Major urban	7.9	9.5	8.0
Other urban	n.a	n.a	n.a
Rural	2.4	2.2	0.2

n.a. classification not applicable to the Australian Capital Territory.

Table 10. Changes in percentage distribution of the State Aboriginal and Torres Strait Islander populations between major urban, other urban and rural areas, 1986-91.

	Aborigines		Torres Strait Islanders		Aborigines and Torres Strait Islanders	
	1986	1991	1986	1991	1986	1991
New South Wales						
Major urban	35.2	36.6	54.2	53.0	36.3	37.7
Other urban	47.3	45.3	30.2	29.9	46.4	44.3
Rural	17.5	18.1	15.6	17.1	17.4	18.0
Victoria						
Major urban	45.6	42.8	56.1	53.1	47.2	44.6
Other urban	43.7	43.7	28.3	28.3	41.4	40.9
Rural	10.7	13.5	15.7	18.6	11.4	14.4
Queensland						
Major urban	19.9	25.1	10.6	18.6	17.9	23.7
Other urban	44.1	43.2	57.5	44.4	47.0	43.4
Rural	36.0	31.7	32.0	36.9	35.2	32.8
South Australia						
Major urban	38.2	38.9	60.1	62.3	39.7	41.2
Other urban	33.0	29.8	18.9	18.3	32.1	28.6
Rural	28.7	31.3	20.9	19.4	28.2	30.2
Western Australia						
Major urban	23.5	24.1	33.5	43.0	23.7	24.5
Other urban	41.5	41.8	53.1	48.5	41.7	42.0
Rural	35.0	34.0	13.4	8.5	34.6	33.5
Tasmania						
Major urban	20.3	19.9	18.8	24.6	20.1	20.6
Other urban	51.9	48.6	48.2	45.5	51.4	48.1
Rural	27.8	31.5	33.0	29.9	28.5	31.3
Northern Territory						
Major urban	n.a	n.a	n.a	n.a	n.a	n.a
Other urban	29.9	33.9	86.1	80.7	30.8	34.6
Rural	70.1	66.1	13.9	19.3	69.2	65.4
Australian Capital Territory						
Major urban	84.8	88.1	96.7	100.0	85.4	88.7
Other urban	n.a	n.a	n.a	n.a	n.a	n.a
Rural	15.2	11.9	3.3	0.0	14.6	11.3

n.a. classification not applicable to the Australian Capital Territory.

Changes in age pattern

Age-distribution

Table 11 summarises changes in age-distribution between 1986 and 1991 for Aboriginal and Torres Strait Islander populations by broad age groups for major urban, other urban and rural areas. On the basis of broad age

groups, there has not been a significant change in overall Aboriginal and Torres Strait Islander population age-structure, except for a slight increase in the share of children aged 0-4 years. This increase in the child population is evident in all locations and among both Aborigines and Torres Strait Islanders.

Table 11. Changes in the age-distribution of Aborigines and Torres Strait Islanders in major urban, other urban and rural areas, 1986-91.

Area	Year	Age group (years) 0-4	5-14	15-64	65+
Aborigines					
Total	1986	14.1	25.9	57.4	2.6
	1991	15.0	25.0	57.5	2.5
Major urban	1986	14.2	24.8	59.3	1.7
	1991	15.0	23.7	59.3	2.0
Other urban	1986	14.6	26.8	56.1	2.5
	1991	16.0	26.0	55.6	2.4
Rural	1986	13,5	25.6	57.7	3.3
	1991	13.7	24.8	58.5	2.9
Torres Strait Islanders					
Total	1986	12.6	24.6	59.2	3.6
	1991	13.7	24.4	58.2	3.7
Major urban	1986	10.9	21.2	64.0	3.9
	1991	13.7	21.7	60.5	4.1
Other urban	1986	13.5	25.5	57.9	3.1
	1991	13.4	25.9	57.4	3.3
Rural	1986	12.4	26.2	57.1	4.3
	1991	13.9	25.5	56.9	3.7
Aborigines and Torres Strait Islanders					
Total	1986	14.0	25.8	57.5	2.7
	1991	14.9	24.9	57.6	2.6
Major urban	1986	13.9	24.5	59.7	1.9
	1991	14.9	23.4	59.4	2.3
Other urban	1986	14.5	26.6	56.3	2.6
	1991	15.8	26.0	55.8	2.4
Rural	1986	13.4	25.7	57.6	3.3
	1991	13.8	24.9	58.4	2.9

While there is an increase in the share of the 0-4 years age group, the share of children aged 5-14 years has shown a decline. This decline is consistently seen among Aboriginal people in all locations, but among Torres Strait Islanders it mainly occurred in rural areas during the intercensal period. Both in major urban and other urban areas the share of children 5-14 years of age increased although not significantly, but this share in rural areas declined from 26.2 per cent to 25.5 per cent. The

decline in the share of young children may be due to several factors. One is the underenumeration of the persons in this age group who are frequently very mobile between households. It is also possible that the tendency for increased self-identification mainly occurred among persons of other age groups, while the 5-14 years age group were already identified in past censuses when very young. Among these factors the more likely reason is the underenumeration of persons at the 1991 Census. However, for the Aboriginal and Torres Strait Islander population as a whole, the overall proportion of children under the age of 15 years, working-age (15-64 years of age) and the aged (65 years and over) remained virtually the same (Table 11). The share of the population 65 years of age and over in major urban areas has, however, shown an increase from 1.7 per cent to 2.3 per cent during the intercensal period yet its share remained under 3 per cent.

Although the overall age-structure did not change significantly between the two Censuses there are some differences in the age-structure between Aborigines and Torres Strait Islanders. Among Aborigines, the share of the child population (under 15 years of age) remained the same, at 40 per cent in both census years, but for Torres Strait Islanders this proportion increased slightly from 37.2 per cent to 38.1 per cent in the same period. Except in other urban areas, there was a modest increase in the Aboriginal working-aged population during the intercensal period, but for Torres Strait Islanders this proportion declined slightly in all areas (Table 11).

Growth rates by age group

Table 12 provides information on the average annual growth rates of the Aboriginal and Torres Strait Islander population by section-of-State according to broad age groups. For the Aboriginal and Torres Strait Islander population as a whole, the 0-4 years age group increased at the highest rate, a pattern that is evident in all States with the exception of the Northern Territory. Even there, the other urban population showed the highest growth among very young children (Table 9). Disproportionately higher growth of the 0-4 year old population may be a result of the combined effects of several factors: actual increase in fertility; improved survival chances of infants and children; increased self-identification among women with young children and poor coverage of young children in the 1986 Census and better coverage in 1991. Gray and Tesfaghiorghis (forthcoming) show that Aboriginal and Torres Strait Islander fertility did not fall in the 1986-91 period as anticipated by them (see Tesfaghiorghis and Gray 1991).

Table 12. Growth rates of the Aboriginal and Torres Strait Islander population by age group and section-of-State, 1986-91.

Section-of-State	Rate of growth per year in each age group 0-4	5-14	15-69	65+	Total
New South Wales	4.6	2.4	3.4	5.3	3.4
Major urban	5.4	2.9	4.1	8.5	4.1
Other urban	3.9	1.8	2.3	3.9	2.5
Rural	5.0	2.9	4.4	2.7	4.1
Victoria	7.5	4.7	5.2	9.1	5.5
Major urban	6.6	3.1	4.1	9.1	4.3
Other urban	6.6	4.6	5.2	7.6	5.3
Rural	15.2	10.2	9.7	13.3	10.7
Queensland	4.2	1.8	2.7	1.4	2.6
Major urban	8.9	7.0	8.1	9.0	8.0
Other urban	3.3	0.6	0.9	-0.8	1.1
Rural	2.3	0.4	1.7	0.6	1.4
South Australia	2.8	2.5	2.4	2.1	2.5
Major urban	3.4	2.5	3.3	7.9	3.2
Other urban	0.6	0.9	-0.1	-0.3	0.3
Rural	4.8	4.5	3.7	-0.6	3.8
Western Australia	3.8	1.8	1.7	-1.0	2.0
Major urban	4.2	2.7	2.2	2.6	2.6
Other urban	3.4	2.2	1.9	-1.0	2.1
Rural	3.9	0.8	1.3	-2.0	1.4
Tasmania	6.2	4.8	5.4	12.0	5.5
Major urban	11.0	5.7	4.7	12.7	6.0
Other urban	3.5	3.7	4.4	12.5	4.2
Rural	8.0	6.3	7.5	10.7	7.3
Northern Territory	2.7	2.3	3.0	0.8	2.7
Major urban	n.a	n.a	n.a	n.a	n.a
Other urban	7.6	4.2	4.8	4.5	5.0
Rural	0.2	1.5	2.1	-0.6	1.6
Australian Capital Territory	8.8	6.3	7.5	3.9	7.3
Major urban	8.7	7.4	7.9	13.6	7.9
Other urban	n.a	n.a	n.a	n.a	n.a
Rural	10.3	-1.2	4.0	-10.0	2.7
Australia	4.2	2.4	3.0	2.4	3.0
Major urban	6.1	3.9	4.7	8.0	4.8
Other urban	4.1	2.0	2.3	1.7	2.4
Rural	2.9	1.8	2.6	0.2	2.4

n.a. classification not applicable to the Australian Capital Territory.

Table 13. Child-woman ratios for the Aboriginal and Torres Strait Islander populations by State, major urban, other urban and rural areas, 1986-91.

	Aborigines			Torres Strait Islanders			Aborigines and Torres Strait Islanders		
	1986	1991	ratio[a]	1986	1991	ratio[a]	1986	1991	ratio[a]
Australia	0.535	0.579	1.08	0.484	0.530	1.10	0.532	0.584	1.10
NSW	0.548	0.622	1.14	0.359	0.481	1.34	0.537	0.612	1.14
Vic.	0.521	0.577	1.11	0.364	0.514	1.41	0.497	0.566	1.14
Qld	0.518	0.563	1.09	0.558	0.579	1.04	0.526	0.566	1.08
SA	0.539	0.551	1.02	0.365	0.393	1.08	0.527	0.535	1.02
WA	0.551	0.614	1.11	0.583	0.469	0.80	0.551	0.611	1.11
Tas.	0.572	0.562	0.98	0.319	0.493	1.55	0.534	0.551	1.03
NT	0.519	0.518	1.00	0.466	0.383	0.82	0.518	0.516	1.00
ACT	0.481	0.486	1.01	0.400	0.958	2.4	0.476	0.509	1.07
Major urban	0.497	0.529	1.06	0.369	0.492	1.33	0.484	0.525	1.08
Other urban	0.552	0.611	1.11	0.528	0.521	0.99	0.549	0.611	1.11
Rural	0.544	0.582	1.07	0.523	0.595	1.14	0.540	0.624	1.16

a. Child-woman ratio (1991) / child-woman ratio (1986).

Child-woman ratios (number of children under the age of five, per woman in the age group 15-49 years) derived from the two Censuses showed an increase in all States except the Northern Territory and the Australian Capital Territory, where they remained constant. The same pattern was evident in all major urban, other urban and rural areas for the period. The Torres Strait Islander child-woman ratio for other urban areas as a whole showed a slight decline (Table 13). If the increased child-woman ratio is a result of increased fertility, then this appears to have been a general trend operating almost everywhere during the intercensal period.

An examination of Aboriginal and Torres Strait Islander child-woman ratios (data not shown) for major urban, other urban and rural areas showed only a few areas where the child-woman ratios did not increase during the intercensal period: in major urban areas only Aborigines in the Australian Capital Territory and Torres Strait Islanders in Western Australia showed a declining trend in child-woman ratios; in the other urban category, Aborigines in Tasmania and Torres Strait Islanders living in Queensland, South Australia and Western Australia showed a decline; and in rural areas the decline was evident only among Aborigines in Tasmania and the Northern Territory and among Torres Strait Islanders in the Northern Territory.

It was noted earlier that the proportion of 5-14 year olds was smaller in 1991 than in 1986. Average annual growth rates clearly show that in virtually all States and sections-of-State the observed intercensal growth rates of Aborigines and Torres Strait Islanders in the 5-14 years age group were unusually lower than those recorded for most other age groups. In South Australia, however, the growth rates of all age groups were relatively lower than in other States and the observed intercensal growth rates of the 15-64 and 65 and over age groups were negative. This suggests enumeration problems. Similarly, in Western Australia the relatively low growth rate of the population aged 5-14 years in rural areas suggests that the 1991 Census would have missed some persons in that age group.

Summary and conclusion

The foregoing analysis indicates that the Aboriginal and Torres Strait Islander population's growth rate of 3 per cent observed during the intercensal period 1986-91, is higher than the expected rate of 2.5 per cent based on the estimated births and deaths for the same period. A comparison of the estimated growth rates of the population with that of the observed rates shows that in all States, except Western Australia, the observed growth rates are higher than the expected growth rates. The available information on internal migration derived from the census did not support the hypothesis that the differences between the observed and expected rates are due to migration, although migration may have influenced the high growth rate of the Aboriginal and Torres Strait Islander population in the Australian Capital Territory. The difference between the observed and expected growth rates is substantial in Victoria (2.1 percentage points) and Tasmania (2.2 percentage points), and indicates possible data problems.

The declining share of the Torres Strait Islander population in Queensland, and extremely high growth rates observed in other eastern States, indicates possible outmigration. Although migration data are not separately available as yet for Torres Strait Islanders, it is possible that some movement out of Queensland could have occurred during the intercensal period, but considering the relative size of the Torres Strait Islander population, it is difficult to explain such high increases in terms of migration alone. The apparently high growth rates may be a result of better coverage in the 1991 Census or increased self-identification. These factors may also explain the higher than expected Aboriginal and Torres Strait Islander growth rates observed in several States.

Based on indirect evidence, such as age-specific sex ratios, Gray and Tesfaghiorghis (forthcoming) highlight extremely large data problems in the Torres Strait Islander population counts. In Western Australia the lower than expected growth rate appears to be a result of an undercount in 1991.

In the past it was observed (Jones 1982; Hugo 1990) that there was a tendency for other islanders (South Sea Islanders, and persons living in Bass Strait), to misidentify as Torres Strait Islanders. Jones (1982) suggested that this is the result of confusion due to lack of clarity in the census question. If this is so then there is a case for rewording the census questions.

While the Aboriginal and Torres Strait Islander population increased at a rapid rate, the overall age-structure of Aborigines and Torres Strait Islanders did not alter in terms of broad age groups. However, the population 0-4 years of age increased substantially between the two Censuses. This is evident in most States irrespective of location (section-of-State) and among both Aborigines and Torres Strait Islanders. The explanation for this is the increase in fertility, as demonstrated by Gray and Tesfaghiorghis (forthcoming) and is a significant change from the pattern of fertility decline observed since the 1970s (Gray 1983, 1990). Despite increases in the 0-4 year old population, the share of children under 15 years of age did not change because of the smaller than expected population size in the 5-14 years age group. Although for many age groups the observed population in 1991 is higher, the higher than expected births and smaller size of the 5-14 year old population appear to be the cause of the difference between the projection and the observed count (Gray and Tesfaghiorghis 1991).[3] This highlights the need to revise future population projections in the light of intercensal trends in fertility and mortality.

It was also observed that the population in major urban areas increased at a higher rate than that in other areas. While the rapidity of the major urban population's growth rate was primarily due to inclusion of a new locality in the major urban category, it was shown that, discounting this, the share of major urban population in 1991 increased for both Aborigines and Torres Strait Islanders. Unless there is an amalgamation in other urban localities, the current population sizes will not permit any other urban locality to move to the major urban category in the near future. Therefore the future size and composition of the major urban Aboriginal and Torres Strait Islander population will be determined by natural increase, interstate and intrastate migration and possible changed identification.

Notes

1. The term States is used throughout and includes the Australian Capital Territory and the Northern Territory.

2. To be strictly comparable, one also needs to consider the number of Aborigines and Torres Strait Islanders in localities which were in the rural category in 1986 and were reclassified as other urban in 1991. This adjustment is not possible as the population figures by individual localities are not yet available.

3. Children 0-4 years of age in 1991 constitute the births which occurred in the five-year period before the Census.

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