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October 2008

Cover page images courtesy of the Australian Institute of Aboriginal and Torres Strait Islander Studies and CAEPR staff members.

**HOW REALISTIC ARE THE PROSPECTS FOR 'CLOSING THE GAPS' IN
SOCIOECONOMIC OUTCOMES FOR INDIGENOUS AUSTRALIANS?**

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No. 287/2008

ISSN 1036 1774

ISBN 0 7315 5662 3

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CONTENTS

Abbreviations and acronyms.....	iv
Abstract	v
Acknowledgments.....	v
Introduction.....	1
Methodological considerations.....	3
Long-run analysis of trends in Indigenous socioeconomic status since 1971	5
Labour force status	5
Income status.....	7
Household size, income and home ownership.....	7
Education.....	8
Health	9
Summarising long- and short-run trends.....	9
Table 1. Absolute and relative change in Indigenous socioeconomic outcomes, long and short series.....	11
Convergence and the prospects for closing the gaps.....	12
Table 2. Number of years till convergence of Indigenous and non-Indigenous outcomes	13
Conclusion	16
Notes	19
Appendix A: Socioeconomic Outcomes Tables.....	23
Table A1. Socioeconomic outcomes for Indigenous Australians, 1971–2006	23
Table A2. Socioeconomic outcomes for other Australians, 1971–2006	24
Table A3. Ratio of Indigenous to non-Indigenous socioeconomic outcomes, 1971–2006	24
References.....	26

ABBREVIATIONS AND ACRONYMS

ABS	Australian Bureau of Statistics
AGPS	Australian Government Publishing Service
ANTAR	Australians for Native Title and Reconciliation
ANU	The Australian National University
ATSIC	Aboriginal and Torres Strait Islander Commission
CAEPR	Centre for Aboriginal Economic Policy Research
CASS	College of Arts and Social Sciences (ANU)
CDEP	Community Development Employment Program
DEWR	Department of Employment and Workplace Relations

ABSTRACT

'Practical reconciliation' and more recently 'closing the gaps' have been put forward as frameworks on which to base and then evaluate policies to address Indigenous disadvantage. This paper uses census-based analysis at the national level to examine trends in Indigenous wellbeing since 1971. There has been steady improvement in most socioeconomic outcomes as measured by standard social indicators in the last 35 years. This finding is at dramatic odds with the currently dominant discourse of failure in Indigenous affairs. However, evidence of convergence between Indigenous and non-Indigenous outcomes is not consistent. There have now been eight censuses since 1971, and this paper seeks to use information of best-case scenario trends to make some crude estimates of when the gaps might be closed in order to assess the realism of this emerging overarching goal of policy.

Keywords: historical evidence of disadvantage, prospects for 'closing the gaps', Indigenous statistics.

ACKNOWLEDGMENTS

An earlier version of a part of this paper was presented to the 2007 Australian Institute of Aboriginal and Torres Strait Islander Studies conference themed *Forty Years On: Political Transformation and Sustainability since the Referendum and into the Future* in a session titled '40 years on: What do official statistics tell us about Indigenous well being'. Another preliminary version of the paper was presented at a seminar given at the University of Wollongong on 12 June 2008. Useful comments were generously given by Mike Dillon, Bill Fogarty, Melinda Hinkson, Melissa Johns, Will Sanders and John Taylor. We are especially grateful for the editorial assistance provided by John Hughes and Hilary Bek. In the lead up to the *Australia 2020* Summit, some preliminary results and discussion from this paper were placed on the CAEPR website to inform that very public debate.

INTRODUCTION

The notion of 'closing the gaps' has attracted considerable attention in Australia during the early days of the new Rudd government elected in November 2007. This is partly because while in Opposition the current Prime Minister had already supported a 'Closing the Gap' campaign—championed by Oxfam, Get Up, Australian for Native Title and Reconciliation (ANTAR) and other Australian non-government organisations—that focused on the 17 year life expectancy gap between Indigenous and non-Indigenous Australians.¹ As part of the national apology to the Stolen Generations made on 13 February 2008, specific reference was also made to closing the gaps in Indigenous child mortality within set time frames. More recently, on 20 March 2008, the new Prime Minister signed a declaration of intent to eliminate the life expectancy gap between Indigenous and other Australians within a generation.² On 5 April 2008, while overseas, Kevin Rudd made a commitment to have annual progress reports on meeting this target tabled in parliament. While the term initially focused on life expectancy gap, the concept has gradually morphed to encompass other forms of disadvantage—this is an acknowledgement that the social determinants are likely to be crucial factors driving the disparities between Indigenous and non-Indigenous health (Bronfenbrenner 1979).

The origins of the term 'closing the gaps' can probably be traced to the special programs of governments in New Zealand in the 1990s that sought to target Maori and Pacific Islander disadvantaged groups with assistance (Te Puni Kōkiri 2000). In Australia, a similar policy of targeted assistance to Aboriginal and Torres Strait Islanders had come to prominence in the late 1980s, with the Aboriginal Employment Development Policy of the Hawke government committing to statistical equality in employment, income and educational status between Aboriginal and other Australians by the year 2000 (Altman 1991; Australian Government 1987). There appears to be no substantive difference between 'closing the gaps' and 'statistical equality': both concepts seek to eliminate socioeconomic disparities. This too was the intent of the Howard government's notion of 'practical reconciliation' that came to prominence after John Howard's election victory speech in October 1998. As a policy framework, practical reconciliation sought to reduce Indigenous material disadvantage in the areas of health, housing, education and employment (Altman 2004: 39). This goal was closely aligned with a growing emphasis during the decade from 1998 on mainstreaming or normalisation, but successive Howard governments were careful not to stipulate precise timeframes for achieving such goals.³ A strong case can be made that the goal of practical reconciliation, without any clearly specified timeframes for achievement of such goals, was itself highly symbolic. It was good political rhetoric but did not provide a basis for a comprehensive policy framework.

It was only in the aftermath of the Northern Territory National Emergency Intervention that the Howard government committed, in its last days, to concrete targets with its pledge to 'stabilise, normalise and exit' 73 prescribed communities in five years (Altman & Hinkson 2007). Arguably, this pledge could be interpreted as a commitment to close the gaps within that time frame. In response to the federal intervention, the language of 'closing the gap' was adopted by the Northern Territory government in August 2007 with its *Closing the Gap of Indigenous Disadvantage: A Generational Plan of Action* (Northern Territory Government 2007).

This paper sets out to do two things, each with some precedents in the recent research literature.

First, in 2004, the authors of this present paper collaborated in an article that provided a historical account of Indigenous socioeconomic change between 1971 and 2001 (Altman, Biddle & Hunter 2005). Examining differences between Indigenous and non-Indigenous socioeconomic outcomes has been a policy research issue for one of us since 1971 Census data first became available (Altman & Nieuwenhuysen 1979). Tracking such change over time has been a core objective of the Centre for Aboriginal Economic Policy Research (CAEPR) since its establishment in 1990 (Altman & Rowse 2005; Rowse 2002). Such analysis has focused on both absolute and relative change according to standard social indicators over time. The initial aim of this paper is to update this time series with 2006 Census data that became available late in 2007.

Second, and most innovatively, we use the emerging trends from data collected in the last eight censuses to make some predictions about when the existing statistical gaps between Indigenous and non-Indigenous outcomes might close and where there is convergence in longer term trends. We are not aware of such extrapolation being attempted across a similar number of variables. Previously projections tended to focus on short run to medium term demographic change and population growth, with most forecasts being used to predict the associated impacts on employment in reports with titles like *The Job Ahead* and *The Job Still Ahead* (see Hunter, Kinfu & Taylor 2003; see Taylor & Altman 1997; Taylor & Hunter 1998). Earlier still, a number of publications had predicted that the Hawke government's goal of statistical equality for Indigenous Australians by 2000 was destined to fail for a number of reasons including historical legacy, cultural difference, diversity of circumstances, geographic distribution and unanticipated rapid population growth (see Altman & Sanders 1991; Gray & Tesfaghiorghis 1991; Sanders 1991).⁴

The likely success of the 'closing the gaps' policy depends on what happens in non-Indigenous Australia. Obviously 'the gap' is directly affected if the non-Indigenous benchmark changes; however the ability of Indigenous outcomes to reach such benchmarks will also change with variations in social and economic conditions. An important consideration in this regard is macroeconomic growth, which varies across the business cycle. Low-skilled workers with little experience—a group that includes most Indigenous people—tend to be the last workers hired in a period of macroeconomic growth and the first workers shed in an economic downturn (i.e., Last In First Out or LIFO accounting). Businesses often rationalise this behaviour on the grounds that they want to minimise turnover of their most experienced (and usually most highly value-added) staff. The crucial point is that the ability to close the gap cannot be sustained indefinitely

as it depends on macroeconomic growth, which by definition goes up and down with the business cycle. Therefore relative Indigenous outcomes are likely to improve during sustained periods of economic growth, but all else being equal, relative outcomes tend to stagnate or worsen in recessionary periods of the cycle.

After discussing relevant methodological issues, this paper provides data on currently observed trends in Indigenous and non-Indigenous outcomes since 1971. Obviously it is not possible to assume that there is always going to be convergence in outcomes, so the following census-based analysis merely provides two scenarios for estimating some temporal bounds on when the gaps might be closed. It is important to emphasise that improving the socioeconomic circumstances of a sub-population relative to the rest of the population is a complex policy task. We focus on relatively optimistic scenarios where there is convergence, as these provide evidence of what might happen in the future if all the 'macro' factors were working in the right direction to close the gaps. The concluding section reflects on some of the issues arising from this analysis.

METHODOLOGICAL CONSIDERATIONS

It is important to be explicit about the methodological challenges that arise when using official statistics from the census. While we have learnt from the recent experience of describing economic history (Altman, Biddle & Hunter 2005), there are several issues that arise for any researcher undertaking systematic analysis of the national population of Indigenous Australians.

These caveats can be categorised into three groups: practical problems, methodological issues and conceptual difficulties. One practical issue is that, over the last 35 or so years, the size of the Indigenous population has increased dramatically. One reason for this is that Indigenous people have become increasingly confident about self-identifying as Indigenous since 1971. This means that one cannot be entirely sure that observed trends are due to real changes in outcomes rather than to changes in composition of the population. Hunter (1998) argues that one could ignore this issue, at least for some of the period we examine, because it does not have a significant impact on socioeconomic outcomes of Indigenous cohorts relative to similar cohorts for the rest of the Australian population. Another practical problem is that changes in census questions and coding make it difficult to get precise comparisons over time. The important thing here is that analysts should be transparent about any assumptions they make in constructing trends. Most of the assumptions used in this paper were outlined in Altman, Biddle and Hunter (2005), but there are a few related issues for the 2006 Census and these will be outlined below where relevant.

One methodological issue is that the Australian Bureau of Statistics (ABS) did not initially have a great deal of experience in collecting comprehensive statistics about Indigenous Australians before the 1971 Census. While the ABS has learnt from its experiences over time, the improved data coverage (and hence quality) may itself alter observed trends.

Conceptually two main issues need to be emphasised. First, a person's Indigenous or non-Indigenous status is primarily based on self-identification derived from a census form completed by individuals. Even here

there is some variation—in very remote regions a special enumeration strategy is used that allows ABS staff to target Indigenous people and assist them in completing specially designed Indigenous personal and household census forms (Altman & Gray 2000). What is important to note is that the Indigenous sub-population used here (and generally) for comparative purposes is a statistical aggregation of individuals who identify, or are identified, as Indigenous rather than a well-defined sociological category. Second, the social indicators that are drawn from census questions reflect the social norms of the dominant mainstream society. Arguably, a number of social indicators that we use mean different things to Indigenous and non-Indigenous Australians.

Following Altman, Biddle and Hunter (2005), this paper focuses only on national trends. The main shortcoming of this approach is that a national analysis loses the diversity in geographic outcomes, such as the local labour market conditions that are likely to be particularly important in influencing changes in socioeconomic status. However, the benefit of a national analysis is that the problem of selective migration between regions will not undermine the robustness of the analysis. Another advantage of a national analysis is that it dilutes any possible impacts of changed Indigenous population composition alluded to above. It is impossible to undertake rigorous sub-national analysis of trends over such a long time period because of the large regional variations in the unexplained component of Indigenous population growth—that is, the population growth related to increased self-identification and inter-marriage between Indigenous and non-Indigenous people. Settled parts of Australia are likely to have particularly large increases in the number of people who now identify as Indigenous but did not do so in previous censuses (Ross 1999).

We have selected robust variables based on both the availability of historically comparable data and our previous experience in constructing such trends (Altman, Biddle & Hunter 2005). There have been eight censuses between 1971 and 2006, but not all provide reliable information about Indigenous Australians. The 1976 Census only analysed information on 50 per cent of the population (as a cost cutting measure) and is therefore difficult to compare with the other censuses. If nothing else 1976 data will be less reliable and any trend calculated using that data are likely to be problematic. The other consideration is that some data were not collected in all censuses. For example, income data was not collected in 1971 (Altman & Nieuwenhuysen 1979).

A problem for comparative inter-censal analysis is that questions asked and coding of responses changed significantly between censuses. Fortunately, the last three censuses have broadly comparable questions, and to a lesser extent comparable coding, and hence it could be argued provide the most reliable estimates of short-term trends.⁵ The down-side of the use of these short run trends between 1996 and 2006 is that this period falls entirely within the growth phase of the current economic cycle. The extrapolation of trends usually requires more than a few observations, so in this paper we also use the long run trends based on information collected as far back as 1971 whenever possible. When no comparable data are available for earlier censuses before 1996, the earliest available valid data are used as the base from which to calculate trends.

Even where data were collected, they are not always available in a usable form. For censuses before 1996 we often had to rely on published data, which were often not sufficiently flexible to allow the calculation of comparable statistics. The 1986 Census is particularly problematic in this regard and was consequently not used here to estimate long-term trends in socioeconomic outcomes for Indigenous and other Australians.

LONG RUN ANALYSIS OF TRENDS IN INDIGENOUS SOCIOECONOMIC STATUS SINCE 1971

The 2006 Census allows us to update the analysis in Altman, Biddle and Hunter (2005) so that we can track changes in socioeconomic outcomes since 2001. This paper augments the tables in the 2005 paper by including comparable data from the 1996 and 2006 censuses in order to provide detailed information on trends in socioeconomic outcomes for both Indigenous and non-Indigenous Australians.⁶ The following sections provide a broad summary of this information, which is documented in the tables at Appendix A. Tables A1, A2 and A3 respectively document socioeconomic outcomes for Indigenous Australians, non-Indigenous Australians, and the ratio between the two.

LABOUR FORCE STATUS

The early 1970s were characterised by some of the lowest unemployment rates in Australia's recorded history. In contrast, the stagflation of the mid 1970s and the international recession of the early 1990s saw large increases in unemployment which were particularly pronounced for the Indigenous population. Since that time unemployment has fallen for Indigenous and non-Indigenous groups in one of the longest unbroken periods of economic expansion ever seen in Australia. Indigenous unemployment rates have very similar trends to non-Indigenous rates—the main differences arise from the Indigenous labour force being disproportionately affected by the recessions of the early 1980s and 1990s.

A complicating factor for interpreting Indigenous labour force status is the rapid expansion of the Indigenous-specific Community Development Employment Program (CDEP). CDEP was devised by the Fraser government in 1977 when unemployment benefits were first being introduced to remote Indigenous communities (Sanders 1997).⁷ In the early 1980s, some 'teething' problems with CDEP were addressed and the scheme began expanding. Notwithstanding its historical connection and early notional fiscal nexus with unemployment benefits, CDEP is regarded as employment for official statistical purposes, although the census does not have a separate category for CDEP scheme participants in the mainstream forms used predominantly in non-remote regions.

The incidence of CDEP increased only gradually and so was a relatively minor influence on Indigenous employment until 1991. The scheme then expanded rapidly as a key element of the Aboriginal Employment Development Policy. It reached the height of its significance in the period analysed in the 2001 Census, when it incorporated just over one-tenth (10.9%) of the Indigenous adult population aged 15 and over. It

has declined quite markedly since that peak, and at the time of the 2006 Census employed just under 7.7 per cent of Indigenous adults.⁸

After 1991, the substantial growth in CDEP participation means that the difference between Indigenous and non-Indigenous unemployment rates will appear less over time, as more Indigenous unemployed get classified as employed once they take up a place in a CDEP scheme—however, the estimated trends in Indigenous unemployment are unlikely to be effected before 1991. The existence (and growth) of the CDEP scheme means that our scenarios of when the unemployment gap might be closed are relatively optimistic.

Another way to assess the labour market outcomes for Indigenous Australians is the percentage of the population aged 15 years and over who are employed. It was only in 2006 that this ratio for the Indigenous population rose above that measured at the 1971 Census. This is not surprising, since previous research has shown that the low-skilled Indigenous labour force suffered severely from the collapse in the demand for labour in the period of economic re-structuring that occurred after the stagflation of the mid 1970s (Fisk 1985; Gray & Hunter 2002; Hunter & Gray 1998). However, the emphasis on the role of CDEP in causing poor Indigenous employment outcomes in recent public debates seems to be challenged by the statistics presented here. The decline in the Indigenous employment to population ratio occurred almost entirely before 1986, before CDEP participation became a significant aspect of Indigenous labour market experience.

If one chose to consider CDEP participation as a form of welfare rather than employment, then Indigenous employment outcomes are substantially worse today than they were in the early 1970s (see Hunter 2007a).⁹ In contrast, non-Indigenous employment improved, largely in the last three censuses. Again, the role of the CDEP scheme in improving Indigenous employment tends to provide an optimistic estimate of convergence in this indicator.

Given that the CDEP complicates our estimates of trends in Indigenous employment, it is instructive to exclude this form of employment and focus solely on private sector employment. Indigenous private sector employment was particularly affected by the structural adjustment in the Australian economy during the 1970s, especially the decline in the manufacturing and agricultural industries (Altman & Nieuwenhuysen 1979). However, private sector employment has expanded considerably since 1981, with the increase greater for Indigenous Australians than other Australians, especially in the last inter-censal period 2001–06. While trends in private sector employment will not be influenced by the rise (and recent decline between 2001 and 2006) in CDEP employment, it will be affected by the increased incidence of privatisation that became popular with Federal and State/Territory governments since the microeconomic reforms that began in the 1980s (Quiggin 1996). Unless privatisation disproportionately increases the number of low-skilled jobs that many Indigenous people are employed in, it is unlikely to substantially affect our estimated date for convergence of Indigenous and non-Indigenous outcomes, for the closing of the employment gap.

Labour force participation rates measure the percentage of the population who either work or look for work and are a key indicator of economic engagement. Participation rates increased to 1991 for both

Indigenous and other Australians, largely as a result of increased participation of females. While there was some improvement in relative participation of Indigenous population *vis-à-vis* other Australians between 1971 and 1991, outcomes have tended to decline since that time as Indigenous participation has fallen at a time when overall labour force participation is static.

INCOME STATUS

One of the main benefits of employment is a higher income or improved access to economic resources. Appendix A records the trends in median personal income since 1981, the earliest year that robust income data were available. Median personal income has gradually increased for the Indigenous population since 1981, but the trend is not as consistent as it is for the non-Indigenous population which saw a combination of stagnation and decline to 1996, but large increase since that time. Consequently the relative income measure improved for Indigenous people until 1996, but declined since that time. Notwithstanding the increases in private sector employment for Indigenous people, the financial benefits of recent macroeconomic growth over the last 10 years seem to be accruing disproportionately to the non-Indigenous population. This is consistent with Australian inequality literature that has shown larger increases at the top end of the income distribution, historically high asset prices and sustained, substantial profits for companies (Hunter 2003; Leigh 2005). Assets and profits are sources of income that Indigenous Australians generally do not enjoy.

HOUSEHOLD SIZE, INCOME AND HOME OWNERSHIP

The average Australian household has been getting smaller over the period being covered here. While Indigenous households remain substantially larger than other Australian households, their absolute size has declined substantially towards the non-Indigenous average, especially since 1991. The relative decline in Indigenous household size compared to non-Indigenous households was limited by the ongoing demographic change that has reduced the size of many, or even most, Australian households.¹⁰ One potential positive implication of this is that the Indigenous housing stock will have less pressure on it than it has had historically, unless this historic decline is offset by population growth that outstrips formation of new housing stock.

One reason why the decline in Indigenous household size is important is that household income is one of the major determinants of poverty since the more people in a household, the greater the opportunity to pool their resources for living expenses. Poverty studies routinely control for household size and composition to determine changes in standard of living and welfare (using an 'equivalence scale' adjustment).¹¹ At a purely mechanical level, average household income will decline with a fall in average household size—to the extent that this fall represents a decline in the number of adults with a potential to earn income. Alternatively, the recent decline in Indigenous fertility may entirely explain the fall in household size (Kinfu & Taylor 2002). If this is the case, then the living standards of Indigenous households will increase because of the decline in the number of dependents using household resources.¹² While it is beyond the scope of this paper to resolve such issues, they should be borne in mind when analysing changes in household income.

Raw household income fell for both Indigenous and non-Indigenous populations to 1991, and then increased substantially thereafter. Given that average personal income increased substantially for Indigenous Australians in the 10 years to 1991 (while non-Indigenous personal income did not change that much), the decline in household income is likely to be due to the declining household size. Another factor may be the relatively depressed labour market during the recession of the early 1990s, which seems to have particularly affected Indigenous employment. That is, some households would be disproportionately affected by the relatively large number of low income people without well-paid employment. This observation is even more germane if one takes into account the fact that 6.8 per cent of Indigenous adults were employed in the CDEP in 1991. The increases in household income in the last two censuses are likely to be influenced by buoyant labour market conditions and historically high real wages, but it may also be associated with new generous government transfers to all families.¹³

The rate of home ownership among the non-Indigenous population has been stable for many years at just over 70 per cent. If anything the incidence of home ownership has declined slightly in recent years with the widespread fall in affordability associated with the rising house prices, especially in metropolitan areas (Harding, Yap & Lloyd 2004). The proportion of the Indigenous population living in a home owned by residents declined substantially in the 20 years after 1971, but there has been steady increase since 1991. Indeed, the incidence of Indigenous home ownership has been equivalent to or exceeded the 1971 level since the 1996 Census.

EDUCATION

Overall, Australians are also more likely to gain educational qualification than ever before. Indigenous Australians have matched this trend quite closely and have even experienced a very small relative improvement in the incidence of post-school qualifications. However, the outcomes from post-school qualifications depend heavily on the type of qualification obtained, with degrees from universities having the largest overall economic benefits in terms of income and employment (Biddle 2007). Unfortunately, proportionally far fewer Indigenous people secure degrees than other Australians, so the trend in qualifications is not as positive as first appearances suggest. This notwithstanding, there has been reasonably steady gains in Indigenous education participation and completion over the 35 years studied.

The complexity of interpreting the change in educational outcomes is illustrated in the recent *National Report to Parliament on Indigenous Education and Training*. Even though this Report focuses on short-term trends, the number of Indigenous students studying at higher education actually declined in 2005 and was at its lowest level since the year 2000 (Commonwealth of Australia 2007: 217). That report also speculates that some potential students postponed higher education studies to take advantage of the strong labour market, and that many students are viewing vocational training as a means of taking advantage of job opportunities in the buoyant industries (Commonwealth of Australia 2007: xxxi).

HEALTH

One of the best measures of health status is life expectancy. Unfortunately, it is not possible to present updated trends because the official method for estimating Indigenous life expectancy has recently changed (see Bhat method in ABS 2004). The new method controls for changing rates of Indigenous self-identification between censuses, but it is difficult to estimate long run trends because Indigenous life expectancy has to be re-estimated for each inter-censal period. Notwithstanding the strengths and weaknesses of the official method for estimating Indigenous life expectancy, Altman, Biddle and Hunter (2005) collated the extant comparable historical data to make some assessment of long run trends in life expectancy before 2001 (see also Ross & Taylor 2002).

Indigenous male life expectancy generally did not improve at the same rate as that for the non-Indigenous males, especially after 1991. Life expectancy for Indigenous females was more variable. After the substantial improvement between 1971 and 1981, the relative life expectancies for Indigenous females declined gradually after 1981 as the life expectancy for non-Indigenous females increased steadily.¹⁴

Health status can also be estimated by a rough proxy that can be measured consistently for all of the relevant censuses: the proportion of the population aged over 55 years (Altman, Biddle & Hunter 2005). The proportion of the population who can be characterised as 'elderly' is an imperfect measure of health because it is also affected by the fertility rate, which determines the total population numbers in the denominator. Notwithstanding, an increase in the proportion of the population who are elderly can be construed as enhancing welfare if it represents either a decline in fertility or a reduction in adult mortality. If fertility is the driving factor, then Indigenous households will benefit from a long-term reduction in age-related dependency rates, which ultimately reduce the demands on household financial and infrastructural resources.

In terms of the percentage of the population who were elderly, the relative situations for Indigenous people worsened between 1971 and 1991. After 1991, Indigenous outcomes did not change relative to the non-Indigenous outcomes until the latest census. It should be noted that while the Indigenous demographic profile is not substantially different to that in 1971, the non-Indigenous profile has changed to reflect the aging of the population in the last three and a half decades.

SUMMARISING LONG- AND SHORT RUN TRENDS

Given that there are well-founded concerns about the reliability of historical data for Indigenous people we present two sets of trends which we will use to estimate the period till various 'gaps' might be closed. The first set of estimates is based on long run trends that use as much information as is available and that we judge to be reliable and comparable. This dates back to 1971. The second set of projections estimate trends based on three observations from the post-1996 period. These short run trends are provided because we can be reasonably confident that such data are reliable and relate to an Indigenous population which is enumerated more or less comprehensively.¹⁵

In addition to the above narrative, Appendix A is also summarised in absolute and relative terms in Table 1. This summary is provided according to changes observed for a long series 1971–2006 and for a short series 1996–2006. Absolute differences are based on Table A1 data, and relative differences from Table A3, which provides Indigenous to non-Indigenous ratios.

Rather than distract the reader with excessive detail, the outcomes from these statistics are presented in Table 1 with a plus (+) to indicate improvement and with a minus (-) to indicate decline in socioeconomic outcome. Our findings can be briefly summarised as follows. For the longer series there are improvements in 12 of 13 variables in absolute terms and 10 of 13 variables in relative terms. For the shorter, more statistically reliable series, there are improvements in absolute terms for 12 of 15 comparable variables and in relative terms for nine of 15 variables.

In overall terms, both series suggest that in absolute and relative terms Indigenous socioeconomic outcomes have improved at the national level for most variables.¹⁶

These findings are very much at odds with the dominant discourse of Indigenous affairs policy failure in the past 35 years. For example, there has been an unambiguous improvement (in both absolute & relative terms) for both the long run and short run series in the areas of household size and income, home ownership and all the education outcomes. Table 1 indicates that improvements were not always consistent for the short run and long run series for two crucial areas: labour force status and health. As indicated above, the labour force trends are affected by the growth of the CDEP scheme, and also by the large-scale structural adjustment in the Australian economy, which became increasingly open to international competition following gradual reductions in tariffs and other trade barriers since 1974. Indigenous workers were and are disproportionately employed in the manufacturing sector, which was severely effected by such structural adjustment (Hunter 2004). It is also probable that there was some residual structural adjustment from the equal pay cases in the pastoral awards during the mid-1960s (Kerr 1986; Rowse 1998).

There was also a certain lack of concordance between the absolute and relative changes in the short run and long run for certain health indicators. In that case the first thing to note is that the changes to the method of calculating life expectancy means that the short run series is based on a brief five year period between 1996 and 2001. Given that part of the reason for changing the methodology was dissatisfaction with the assumptions that underpin the calculations, it is advisable to be particularly cautious about these estimates. However, even if one focuses solely on the health proxy of the incidence of elderly population there is some inconsistency in the short run and long run series. While there were absolute improvements in both series, the long run trends in relative outcomes are actually negative. The demographic bulge of the non-Indigenous baby boomers is working its way through Australian society over this period, and in this context the relative improvement in the number of older Indigenous people is particularly noteworthy.

Table 1 provides a summary of the broad trends since 1971 (and 1996) to assist the reader distinguish between absolute and relative changes or trends. There was obviously an even greater variation in trends for the various inter-censal periods, but it is beyond the scope of this paper to elaborate on all noteworthy

Table 1. Absolute and relative change in Indigenous socioeconomic outcomes, long and short series^a

Outcomes	Long series	Long series	Short series	Short series
	1971–2006: absolute change	1971–2006: relative change	1996–2006: absolute change	1996–2006: relative change ^b
Unemployment rate (% labour force)	—	+	+	—
Employment to population ratio (% adults)	+	—	+	—
Private-sector employment (% adults)	+	—	+	+
Labour force participation rate (% adults)	+	+	—	—
Median weekly personal income \$A (2006)	+	+	+	—
Household size	+	+	+	+
Median weekly household income \$A (2006)	+	+	+	+
Home owner or purchasing (% population)	+	+	+	+
Never attended school (% adults)	+	+	+	+
Post-school qualification (% adults)	+	+	+	+
Degree or higher (% adults)	<i>n.a.</i>	<i>n.a.</i>	+	+
Attending educational institution (% 15–24 year olds)	<i>n.a.</i>	<i>n.a.</i>	+	+
Male life expectancy at birth (years)	+	+	—	—
Female life expectancy at birth (years)	+	+	—	—
Population aged over 55 years (%)	+	—	+	+

Notes: a. Based on Tables A1–A3. Note that where data are not available for one census the latest available data are used.

b. Some improvements are due to minor positive changes not evident in Appendix A, where ratios have been rounded to two decimal places.

variations in trends. Interested readers are referred to Altman and Hunter (2003) and invited to draw their own inferences from the data provided in the Appendix.¹⁷

CONVERGENCE AND THE PROSPECTS FOR CLOSING THE GAPS

As indicated above, some of the data in Appendix A were not collected in 1971 (e.g. income), while other data were either unavailable publicly or were not available in a consistent form for all censuses (e.g. private sector employment or home ownership data). Notwithstanding such difficulties it is possible to estimate trends for many of the data sets reported in Altman, Biddle and Hunter (2005). In order to estimate the prospect for closing the gaps we have estimated the number of years before a gap could be closed using trends identified in Appendix A over two time periods, 1971–2006 and 1996–2006.¹⁸ That is, using a simple (linear) projection of observed changes in relative outcomes, we estimate when Indigenous indicators will be the same as those for other Australians.

Where the time series is not complete we use the trends based on the longest available period. Convergence is estimated as the number of years required to eliminate the gap between Indigenous and non-Indigenous Australians (where the gap is measured in relative terms) following current trends. In order to account for the fact that there is some variation in the longest period for which consistent data are available, the trend estimates are calculated as the improvement in relative outcomes per year. This trend (or gradient) is projected out to identify the time when the 'gap' between Indigenous and non-Indigenous indicators will be removed.

From an analytical perspective it is always risky to make excessively precise claims about long-range forecasts. While our analysis here does not present a formal time series analysis, readers should bear in mind that forecast errors always increase as the lead time becomes longer (Armstrong 2001). Most forecasts become unreliable quite quickly and are rarely reliable after a decade has lapsed. The unreliability of our estimates of convergence is underscored by the fact that there is a divergence between Indigenous and non-Indigenous outcomes for several of the variables examined. Accordingly, our estimates must be interpreted as an optimistic or best-case scenario for the possibility of closing the gaps, if current trends continue. Our estimates are not a prediction of what *will* happen, but rather a description of what *may* happen if current trends continue.

Note that not all trends in Indigenous and non-Indigenous outcomes converge. Indeed, divergence in outcomes can even occur if Indigenous outcomes are improving in absolute terms, but such increases are not as large as those evident for other Australians. The main divergence in outcomes occurs in labour market data, where Indigenous outcomes are not improving over the long term at the rate of other Australians. However, this is an area which is complicated by the effect of CDEP and the disproportionate location of Indigenous people in regional and remote areas where labour market conditions are relatively depressed (nodes of high mining activity aside).

Table 2. Number of years till convergence of Indigenous and non-Indigenous outcomes

	Convergence based on long run trends since 1971	Convergence based on post-1996 trends
Unemployment rate (% labour force)	28	**
Employment to population ratio (% adults)	**	**
Private-sector employment (% adults)	**	23
Labour force participation rate (% adults)	100+	**
Median weekly personal income \$A (2006)	100+	**
Household size	100+	100+
Median weekly household income \$A (2006)	94	100+
Home owner or purchasing (% population)	100+	100+
Never attended school (% adults)	2	14
Post-school qualification (% adults)	44	25
Degree or higher (% adults)	NA	100+
Attending educational institution (% 15-24 year olds)	NA	63
Male life expectancy at birth (years)	100+	**
Female life expectancy at birth (years)	47	**
Population aged over 55 years (%)	**	100+

Note: If Indigenous and non-Indigenous outcomes are diverging then the entry is a double asterisk. The trends are based on the maximum period for which comparable data was available. For example, the long run convergence for income calculated from 1981 as there were no available estimates for 1971. If the number of years to convergence is greater than 100 years, then the table entry is shown as 100+.

For those outcomes that are converging, Table 2 reports when the expected number of years till convergence might occur if policy settings do not change significantly. If the number of years to convergence is greater than 100 years, then the table entry is shown as 100+. This was done in acknowledgment of the fact that any forecast over this time frame is highly uncertain and hence unreliable. Having regard to the commitment to close the gaps within one generation, the truncation of the estimated convergence estimates at 100 years viewed as indicating whether the gaps might be closed in just over three generations.¹⁹

The long run trends in unemployment rates indicate that Indigenous and non-Indigenous outcomes will converge in 28 years around the year 2035. This is a potentially excessively optimistic scenario because it may be associated with the rise of the CDEP scheme. Indeed, the more recent inter-censal trends show that Indigenous and non-Indigenous unemployment rates are diverging—an observation that might be associated with the relatively stagnant number of CDEP participants (at least in net terms between 1996 and 2006).

The employment to population ratios are diverging for both trend estimates. Convergence in employment and unemployment are obviously dependent on where Indigenous live, the structure of incentives facing individuals and organisations (who are making decisions on where to locate), as well as the state of national and regional economies. With respect to the latter, there is some indication that the long national economic boom may be coming to end. If this happens, then low qualified and short-term workers are often the first to be shed by firms whose profit margins are being squeezed.

As noted above, Indigenous private sector employment has been particularly depressed until the late 1980s. However, private sector employment increased substantially for Indigenous people since 1996. This may reflect the tendency to privatise low-skilled jobs in the public sector, but it has been achieved despite the relatively depressed labour market conditions in regional Australia. While this recent improvement of Indigenous participation in the private sector is noteworthy, the estimated year of convergence in 23 years may be excessively optimistic, as it assumes sustained economic growth at recent historically high levels.

Relative labour force participation rates improved for Indigenous Australians since 1971, but recent trends show that Indigenous people have been rather less successful in this crucial dimension of economic engagement since 1996. The most optimistic scenario for the rate of long run improvement in relative outcomes shows that the gap in labour force participations will not be eliminated within the next century.

The convergence of individual income is only evident in the long run trends—even then convergence tends to be rather slow, with an estimated closing of the gap projected to take at least another 100 years. The lack of income convergence evident from recent trends may be a reflection of the growing national income inequality where low income groups are not faring as well as the rest (especially the top 25% of the distribution, see Leigh 2005).

The decline in Indigenous household sizes vis-à-vis other Australians offers a rather more positive story. On current trends it will be at least three generations before this gap is closed. However, this is one gap that we would be reasonably confident that can be closed because the demographic and economic factors will tend to be mutually reinforcing. High educational outcomes and income tends to be associated with smaller families. For example, human capital models make a firm prediction of this occurring, largely as a result of the increasing opportunity cost of female time—hence making work more attractive relative to home production activities (Becker, Murphy & Tamura 1990).

Median household incomes appear to be converging albeit rather slowly. The long run trends indicate that the gap will be closed in 94 years. In contrast, recent trends seem to indicate that convergence will not occur for at least another 100 years. The recent trends illustrate the main problem with a paradigm based on closing the gaps—namely that the goal posts continually move. Indigenous household income improved, but not as fast as that of non-Indigenous Australians. Another point that needs to be made is that raw household income will converge faster than predicted in Table 2 because the size of Indigenous households fell by more than non-Indigenous households, thus reducing the number of people who could assist to close the gap in household income.

The predicted convergence in home ownership is estimated to take place in around 100 years time.²⁰ It is probable that the rate of convergence will be closely linked to the ability to improve Indigenous household incomes. The other relevant factors are the ability to resolve current transactions and administrative costs that seem to impede the individuation of leases on Aboriginal-owned land. Unless such tenure issues are resolved, institutional barriers might result in the home ownership gap being intractable.

The most optimistic prediction is for the education convergence. The gap in never having attended school is predicted to close between two and 14 years depending upon which trend is used. In recent years, almost all Indigenous children attend school at some stage—the main residual concerns are now about retention rates and the quality of schooling and outcomes for those who are attending.

The predicted convergence in post-school qualification is also quite optimistic for both projected trends—the gaps may be closed within 25 or 44 years depending on the trend estimates used. One reason for this relatively positive estimate is that such outcomes are amenable to fast policy action. For example, the mutual obligation regimes—which have become increasingly popular with government as a means of providing conditional welfare payments—tend to reward recipients who return to their studies. However, it may become more difficult to improve outcomes as the quality of the initial educational attainment becomes more central to performance. That is, it may be possible to improve vocational training through Technical and Further Education Institutes in the short run, but the ability to enhance the participation in universities and other tertiary institutes may be limited by the quality of initial schooling.

Even though we only have short run trends for attendance of youth (aged 15–24 years) at educational institutions, convergence in rates of attendance would not occur for another 63 years. If the calculation were done to exclude secondary students, thereby focusing on people studying at tertiary educational institutions, convergence would not take place for over 100 years.²¹ The difficulty in achieving convergence for the more demanding tertiary qualifications is confirmed by the fact that the gap in the incidence of degrees among Indigenous and non-Indigenous people is not predicted to close for at least another century.²²

As indicated above, the ABS recently changed the method of predicting life expectancy for Indigenous people to take into account changing Indigenous identification (see Bhat method in ABS 2004; ABS/Australian Institute of Health and Welfare 2005: 148). Whatever the merits of the new methodology, the estimates are not strictly comparable with the previous estimates of life expectancy and hence cannot be used to calculate long run trends. Hence, we will use the older unadjusted series to estimate trends in male and female life expectancy. On historical trends, and in the absence of significant and successful policy innovations, it is hard to see the gap in male life expectancy being removed for at least another 100 years. Current trends are more optimistic in terms of closing the gaps in female life expectancy, with the estimated convergence in 47 years. However, recent trends seem to indicate that this is exceptionally optimistic, as the relative gap increased between 1996 and 2001.

Our earlier analysis used the demographic proxy for health of the proportion of population aged 55 and over (Altman, Biddle & Hunter 2005). This proxy is easy to calculate, even if it is rather more difficult to

interpret.²³ Notwithstanding, the recent trend in this proxy seems to indicate that the estimated time to convergence of female life expectancy is too optimistic and that the resources required to close the gap in life expectancies within one generation will not be trivial.

CONCLUSION

Policies designed to close the gap between Indigenous and non-Indigenous populations are intrinsically difficult to operationalise since many of the underlying causes are inter-generational in nature. For example, Marmot and Wilkinson (1999) and many others have identified that life expectancy depends on what happens in early childhood when crucial decisions are made by previous generations (by definition). Health outcomes are also likely to be dependent on social, cultural and community contexts (Bronfenbrenner 1979), and hence policies that address these gaps must have a long-term focus and tackle problems at several levels. It would be a mistake for policy makers to 'pick winners' by focusing solely on outcomes for children, because human development is realised within a family and community environment in which individuals are firmly embedded.

While all governments advocate that their policies are preferable to those of previous governments, it would be naïve to think that prolonged improvements in Indigenous socioeconomic status can be achieved easily. Even if new policies represent a structural break with the past, the complexities of delivery mean that it is difficult to sustain any improvements for prolonged periods. It is in the nature of the political cycle, where Federal elections are held every three years, that structural breaks in approach may not be sustained past the election of the next government. This, however, does not appear to be the case in the recent transition from Howard to Rudd Governments where most of the extant policy framework, including the Northern Territory National Emergency Response Intervention appear to have been retained. This 'bipartisanship', or rather policy acquiescence, may constitute a multi-election strategy—but the point being made here is that there is substantial pressure for political parties to differentiate their policy positions from those of their opponents and hence continuity of the policies that 'work' can easily be lost.

Another major limitation of our convergence analysis is that it depends on what is happening in the rest of the community. In addition to the differential and uneven impact of the macroeconomic growth on Indigenous and other outcomes, it might be that environmental constraints arising from excessive greenhouse gas emissions and associated global warming place a constraint on economic growth, hindering distributional goals such as closing the gaps. In a mechanical sense, low growth economies have less government revenue to invest in infrastructure shortfalls or for the provision of transfer payments to the worst-off Australians. Perhaps an even more important dynamic is that any future economy where growth is deliberately curtailed may have relatively high rates of unemployment and poor job prospects for low-skilled workers, including many Indigenous Australians. Any recession, whatever the source of the downturn, is likely to curtail a government's capacity to 'close the gaps' between Indigenous and other Australians.

It could be argued that our estimates of convergence are too optimistic. Accordingly, our analysis must be supplemented with qualitative and behavioural analyses that illustrate the complex developmental challenges facing Indigenous Australians. However, if one does include some behavioural assumptions, forecasts can become redundant very quickly. For example, the short run forecasts of Indigenous labour force status in earlier studies were generally accurate (Hunter & Taylor 2004), but the medium term projections (10 years out) failed to anticipate the prolonged economic boom. Even if behaviourally informed analyses were conducted, they may demonstrate that process/rights-based issues and symbolism can motivate and de-motivate people and hence lead to relatively better or poorer outcomes than we predict. If that is the case then we need to expand our conception of disadvantage to include both practical and symbolic considerations rather than view these two elements as constituting some sort of trade-off. In our opinion, there is no evidence of direct trade-off between practical and symbolic issues and such distinctions probably represent a false dichotomy.

Clearly, official statistics based on mainstream social norms do not capture the extent of Indigenous alienation from mainstream Australia. There are many different and inter-related dimensions of deprivation, social exclusion and poverty facing Indigenous Australians (Daly & Smith 2003; Hunter 1999, 2000). Policies designed to redress the gaps between Indigenous and non-Indigenous socioeconomic outcomes need to take into account the inter-dependence between extant disadvantages and be informed by evidence on how disadvantage evolves over the 'life-cycles' of individuals and communities (Hunter 2007b).

A significant issue emerging in the literature is that it is difficult to establish reliable and robust long run trends. The caveats listed above illustrate why one has to be cautious about making strong predictions about when the gap between Indigenous and other Australians might be closed. The evidence presented here indicates that it is probable that the long run trends in Indigenous socioeconomic status are positive, and hence the recent dominant discourse of policy failure in Indigenous affairs is wrong or over-stated.

Two areas of particular concern for closing the gaps are labour force status and health. While constructing reliable forecasts is difficult, predicting labour force status is particularly problematic given the obvious interactions with the macroeconomic growth. Hunter and Taylor (2004) showed that rudimentary estimates that attempt to control for demographic factors can be reasonably accurate in the short run (some of the 2001 projections were accurate to one significant digit), but there were considerable differences in the *ex post* outcomes for medium term forecasts for 2006 (i.e., the actual employment/population ratios were 43.2% in the 2006 Census compared to the predicted ratio of 38.1% in Hunter and Taylor). The substantial and prolonged economic growth between 2001 and 2006 appears to have created a substantial number of jobs many of which have been secured by Indigenous Australians.

Demographic transitions and increased identification is the imponderable factor here. The change in official methodology of calculating life expectancy is an implicit recognition of the importance of such changes. Even if one is willing to suspend disbelief in the short run, it is more difficult to do this in the long run. The increased propensity to identify as Indigenous and the substantial rates of intermarriage will mean that

people who would historically be characterised as non-Indigenous will now be classified as Indigenous. If such people have socioeconomic and demographic characteristics that are closer to the non-Indigenous profile then there is a built in tendency towards convergence.

Obviously there is likely to be substantial variation in regional outcomes between sub-national populations, but in broad terms there is less difference in the regional trends than one might expect (Hunter 2007a). While the magnitude of the original 'gap' can be rather different for some outcomes in remote and non-remote areas, especially for the economic indicators, the overall trends are remarkably similar. However, this may be because the standard remoteness classification hides more variation than it explains. Recent analysis at a much smaller level of geography shows variation in trends in Indigenous outcomes over the most recent inter-censal period (Biddle, Taylor & Yap forthcoming). For example, full-time private sector employment increased substantially for the Indigenous population relative to the non-Indigenous population in Brisbane and Perth, but declined in Sydney. For some types of analysis, therefore, it is important to concentrate on the level of geography that labour markets or geographies are bounded by (Taylor & Biddle 2008). Whatever the trends, the underlying causes of the gap are likely to be different in remote and non-remote Australia, and hence a regionally differentiated policy response is likely to be warranted.

As we enter a new political cycle in Indigenous affairs policy making it is important that some of the historical evidence presented here is not overlooked, especially during a period when the new discourse of policy making emphasises evidence base over either anecdote or ideology. We concur that the socioeconomic gaps between Indigenous and other Australians remain unacceptably high. While our analysis suggests that at the national level there has been improvement in the three and a half decades to 2006, we also accept that the current rate of improvement is too slow. Nevertheless our predictions indicate that it will take many years, possibly many generations, before the gaps are closed if we use recent economic history as our measuring rod.

To conclude, we make two observations. First, the long lead times that we have estimated to close the gaps suggest that some fundamentally new approach might be needed to ensure structural change of such a degree as to significantly alter the time frame we are predicting. One possibility is to require a fundamental reallocation of property rights in resources that fully acknowledge the original ownership of the country.²⁴ Another alternative is that a massive increase in investment in Indigenous infrastructure and Indigenous people may eventually affect the persistent gaps. Second, we propose that a degree of policy realism and caution is required in new policy commitments. The only way to measure closing the gaps outcomes will be with the sorts of statistics that we have accessed here, inadequate as they might be from a public policy or Indigenous perspective. These statistics will form the basis for assessing any commitments to closing the gaps—this is the statistical evidence base that will constitute political accountability. Under such circumstances we would counsel that commitments to 'reducing disparities' might be a more realistic policy goal for the Rudd Government than 'closing the gaps'.

NOTES

1. This is a widely cited figure based on the ABS/Australian Institute of Health and Welfare (2008). Another alternative method is provided in Vos et al. (2007) who estimate that the difference between Indigenous and non-Indigenous life expectancy is around 13 years.
2. See Oxfam press release, 'Oxfam welcomes decision by Prime Minister Rudd to sign nine point plan to end Aboriginal health crisis', 20 March 2008, available at <<http://www.oxfam.org.au/media/article.php?id=446>>.
3. Although the Productivity Commission was commissioned to provide biennial reports on progress in addressing Indigenous disadvantage (Steering Committee for the Review of Government Service Provision 2003, 2005, 2007).
4. Note that these earlier analysis were not based on forecasts, but were rather argued on a priori grounds.
5. One possible exception is the data on private sector employment, which is provided in a slightly different format in 2001 compared to either 1996 or 2006. However, that qualification does not affect the validity of the trend estimated between 1996 and 2006.
6. There are some minor differences between the pre-2006 estimates provided in the Appendix and those reported in Altman, Biddle & Hunter (2005)—these are mostly rounding errors in the latter, but they are indicated in the text where appropriate.
7. The CDEP scheme began as an innovative program that converted the notional equivalents of the unemployment benefit entitlements of Aboriginal people in remote areas into grants to Aboriginal organisations from the Commonwealth Department of Aboriginal Affairs. These grants were then used by Indigenous organisations to employ potential unemployment benefit recipients in part-time work. The CDEP scheme was developed as a response to the perceived social threat of 'sit-down' money to Indigenous communities in the 1970s. Ironically, the scheme is now being criticised as being one of the main factors driving the social effects of prolonged welfare dependence.
8. The 2006 CDEP participant numbers are estimated from the Department of Employment and Workplace Relations (DEWR) annual report, while the population estimate is derived from 2006 Census Estimated Residential Population.
9. It is unclear on what basis one would make such a choice, as most CDEP participants work for funding provided by the Federal Government. Such a classification would be akin to categorising public sector employment as a form of welfare.
10. While household sizes are substantially larger in remote areas compared to non-remote areas, recent declines in the size of Indigenous households is largest in absolute terms in remote areas (Hunter 2007a).

11. For example, Hunter, Kennedy & Biddle (2004) estimate 'equivalised' income by dividing household income by household size to control of household size. There are more sophisticated measures of household income that control for the composition of household, but that is beyond the scope of this paper.
12. Where household welfare is measured by adjusted (equivalised) income.
13. The last 10 years have seen a substantial increase in transfers to families, especially families with children (e.g. Family Tax Benefits). However, given that the census measures pre-tax income, this explanation is only valid if the transfers occur outside the tax system (not as tax rebates) and hence could be construed by respondents to the respective censuses as being part of their gross income.
14. Note that most of the life expectancy estimates in Appendix A were rounded in Altman, Biddle & Hunter (2005). However, the Indigenous estimates for 1971 were taken directly from Smith (1980: 279) and are reported to one significant digit to illustrate that there was some difference in male and female life expectancy. This relatively small difference in life expectancy is probably due to the high rates of Indigenous deaths in child birth at the time.
15. Although we note that there was a substantial divergence in 2006 between the national Census count (around 450,000) and the comparable Estimated Resident Population for Indigenous Australians (around 512,000), there is an even larger divergence evident when measured at a sub-national level. For example, the ABS Post Enumeration Survey identified an estimated undercount of 24% in the Kimberley region of Western Australia and 19% in the Northern Territory.
16. Two possible exceptions to this observation are in the area of labour force status and health. As indicated above, the estimated trends are complicated by the interactions of labour force indicators with the macro-economy and measurement error for health proxies.
17. Altman and Hunter (2003) utilised the unprecedented alignment of the electoral and statistical cycles between 1991 and 2001 to explore the statistical success of the practical reconciliation espoused by Prime Minister John Howard. This exercise could be undertaken because during the inter-censal period 1991–1996 the Hawke and Keating Governments were in power, while during the period 1996–2001, the first and second Howard Governments were in control. The outcomes from this research were initially very politically contentious because they indicated that the earlier Labor Government outperformed the later Coalition Government in 'closing the gaps'. This in turn had implications for a broader debate at that time as to whether practical reconciliation yielded superior outcomes to symbolic reconciliation. A series of subsequent analyses from the Human Rights and Equal Opportunity Commission, the ABS and the Productivity Commission (summarised in Altman 2004) confirmed this finding and took some of the political heat out of the issue. While the unusual alignment between electoral and statistical cycles is now less apparent (i.e. the last Federal election was in 2007 and not 2006), we will briefly reflect on such issues in this endnote.

The period 1991–96 saw some relative and absolute improvements in Indigenous socioeconomic status as described in Appendix A. The first five years of Howard Governments (1996–2001) saw some absolute improvements but fewer relative improvements, as described in Altman and Hunter (2003: 13). This was due primarily to rapid improvement for non-Indigenous Australians—indeed our main concern at the time was that during such a period of macroeconomic growth, the gaps in relative well-being seemed relatively intractable. Interestingly, during the second five years of Howard governments from 2001–06, there were more relative and absolute improvements than in the period 1991–96 or in the period 1996–2001. It is particularly noteworthy that in the most recent inter-censal period 2001–06, there was absolute improvement in almost all variables. This suggests that the Indigenous population benefited from the overall expansion of the national economy. In relative terms, however, there was improvement in seven of 12 comparable variables, suggesting that closing the gaps was made difficult by the higher relative prosperity of the non-Indigenous population.

What might explain this pattern of inter-censal change in major socioeconomic indicators? It might, on the one hand, suggest that the 'new mainstreaming' in Indigenous policy, introduced by the Howard Government in 2004 and described fully in Altman (2004), was having positive impacts by the time of the 2006 Census. This is unlikely because of the short the lead time of only two years, but it is at least a possibility. On the other hand, there is the possibility that as economic growth has continued during the last term of the Howard Government, some benefits were eventually trickling through to Indigenous Australians. In any case, in early November 2007, neither the Howard Government nor the media seemed willing to pick up this finding and attribute it to a particular approach in Indigenous affairs.

18. The choice of base year obviously impacts on the prospects for and rate of convergence. For example, while the broad conclusions remain the same if 1981 is used as the base year rather than 1971, doing so results in convergence rather than divergence in employment, full-time employment and private sector employment. However, this convergence only occurred after a relatively long time period (71 years, 50 years and 44 years respectively).
19. A generation has traditionally been defined as 'the average interval of time between the birth of parents and the birth of their offspring'. Before the baby boomer 'generation', the length of a generation was generally estimated to be approximately 20 years, but this figure has crept up over time (even in the Indigenous population) and it is now closer to 30 years.
20. If one focuses on the indicator—the proportion of Indigenous households who own their own home—then the rate of convergence in home ownership is slightly more optimistic, and Indigenous outcomes will be the same as non-Indigenous outcomes in a little over 80 years time. This estimate is closer to the short run estimate in Table 2 because that indicator is only available consistently since 1991.
21. It was only possible to calculate the long run trends for this outcome between 1981 and 2001 because of data comparability issues.

22. This is also confirmed by the fact that, based on post-1996 trends, there will not be a convergence in Year 10 completion for another 17 years—in contrast, the convergence in Year 12 completion will take much longer and will not occur for another 96 years.
23. Unfortunately, the proportion of elderly (aged 55 and over) is an imperfect measure of health because it is also affected by the fertility rate, which determines the total population numbers in the denominator. However, an increase in the proportion of the population who are elderly is positive if it represents either a decline in fertility or a reduction in adult mortality. If fertility is the driving factor, then Indigenous households will benefit from a long-term reduction in age-related dependency rates, which ultimately reduce the demands on household financial and infrastructural resources.
24. A philosophical justification for this proposition can be based on Nozick (1974) who mounts a case against addressing equity through redistribution—instead he argues that policy makers should establish a clear set of property rights based on original possession.

APPENDIX A: SOCIOECONOMIC OUTCOMES TABLES

Table A1. Socioeconomic outcomes for Indigenous Australians, 1971–2006

Variable	1971	1981	1991	1996	2001	2006
Unemployment rate (% labour force)	9.0	24.6	30.8	22.7	20.0	15.6
Employment to population ratio (% adults)	42.0	35.7	37.1	40.7	41.7	43.2
Private-sector employment (% adults)	29.7	17.2	20.5	21.6	n.a.	32.8
Labour force participation rate (% adults)	46.1	47.3	53.5	52.7	52.1	51.2
Median weekly personal income (\$A 2006)	n.a.	217.5	244.8	245.6	246.7	267.4
Household size	4.6	4.1	4.0	3.6	3.4	3.4
Median weekly household income (\$A 2006)	n.a.	784.9	757.7	n.a.	913.2	1,072.7
Home owner or purchasing (% population)	26.1	19.7	19.1	26.1	26.8	30.0
Never attended school (% adults)	22.7	10.7	5.1	3.1	3.2	2.7
Post-school qualification (% adults)	3.2	5.0	9.5	12.8	18.2	23.8
Degree or higher (% adults)	n.a.	n.a.	n.a.	2.2	3.3	4.4
Attending educational institution (% 15–24 year olds)	n.a.	n.a.	n.a.	27.7	33.4	34.4
Male life expectancy at birth (years)	49.6	56.0	57.0	57.0	56.0	n.a.
Female life expectancy at birth (years)	50.0	64.0	64.0	64.0	63.0	n.a.
Population aged over 55 years (%)	7.3	6.4	6.2	6.3	6.7	8.2

Note: 'n.a.' means that the data was not available in that year.

Source: ABS Census of Population and Housing 1971, 1981, 1991, 1996, 2001 and 2006.

Table A2. Socioeconomic outcomes for other Australians, 1971–2006

Variable	1971	1981	1991	1996	2001	2006
Unemployment rate (% labour force)	1.6	5.8	11.4	9.0	7.2	5.1
Employment to population ratio (% adults)	57.8	58.2	56.3	56.4	58.9	60.5
Private-sector employment (% adults)	45.6	41.0	40.6	46.3	n.a.	52.1
Labour force participation rate (% adults)	58.8	61.8	63.6	62.0	63.4	63.7
Median weekly personal income (\$A 2006)	n.a.	395.6	396.8	382.5	440.5	465.2
Household size	3.4	3.1	2.9	2.7	2.6	2.6
Median weekly household income (\$A 2006)	n.a.	1,087.9	990.4	n.a.	1,171.6	1,375.3
Home owner or purchasing (% population)	70.5	73.4	70.2	72.5	72.9	73.4
Never attended school (% adults)	0.6	0.7	1.0	0.7	1.0	0.9
Post-school qualification (% adults)	23.7	27.7	32.3	39.1	41.6	45.9
Degree or higher (% adults)	n.a.	n.a.	n.a.	11.2	14.8	18.3
Attending educational institution (% 15–24 year olds)	n.a.	n.a.	n.a.	49.0	54.8	55.2
Male life expectancy at birth (years)	68.0	71.0	74.0	75.0	76.0	n.a.
Female life expectancy at birth (years)	75.0	78.0	80.0	81.0	82.0	n.a.
Population aged over 55 years (%)	17.1	18.6	19.6	20.4	22.0	24.7

Note: 'n.a.' means that the data was not available in that year.

Source: ABS Census of Population and Housing 1971, 1981, 1991, 1996, 2001 and 2006.

Table A3. Ratio of Indigenous to non-Indigenous socioeconomic outcomes, 1971–2006

Variable	1971	1981	1991	1996	2001	2006
Unemployment rate (% labour force)	5.63	4.24	2.70	2.52	2.78	3.06
Employment to population ratio (% adults)	0.73	0.61	0.66	0.72	0.71	0.71
Private-sector employment (% adults)	0.65	0.42	0.51	0.47	n.a.	0.63
Labour force participation rate (% adults)	0.78	0.77	0.84	0.85	0.82	0.80
Median weekly personal income (\$A 2006)	n.a.	0.55	0.62	0.64	0.56	0.58
Household size	1.35	1.32	1.38	1.33	1.31	1.31
Median weekly household income (\$A 2006)	n.a.	0.72	0.77	n.a.	0.78	0.78
Home owner or purchasing (% population)	0.37	0.27	0.27	0.36	0.37	0.41
Never attended school (% adults)	37.83	15.29	5.10	4.43	3.20	3.00
Post-school qualification (% adults)	0.14	0.18	0.29	0.33	0.44	0.52
Degree or higher (% adults)	n.a.	n.a.	n.a.	0.20	0.23	0.24
Attending educational institution (% 15–24 year olds)	n.a.	n.a.	n.a.	0.56	0.61	0.62
Male life expectancy at birth (years)	0.73	0.79	0.77	0.76	0.74	n.a.
Female life expectancy at birth (years)	0.67	0.82	0.80	0.79	0.77	n.a.
Population aged over 55 years (%)	0.43	0.34	0.32	0.31	0.31	0.33

Note: 'n.a.' means that the data was not available in that year. Results have been rounded to two decimal places.

Source: ABS Census of Population and Housing 1971, 1981, 1991, 1996, 2001 and 2006.

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