

THE PREVALENCE OF CHILDLESSNESS IN AUSTRALIA

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Estimates of historical and contemporary levels of childlessness are both subject to assumptions about data and method. In Australia, the proportion childless has fluctuated considerably over the past century, ranging from 30 per cent of women born around the turn of the twentieth century to below 10 per cent in the cohorts that produced the baby boom. Although childlessness is increasing among women currently in their childbearing years, a return to record levels is unlikely in the short term. It is expected that about one in five women currently of reproductive age will remain childless.¹

INTRODUCTION

How prevalent is childlessness in Australia? This question is important to understanding social changes and explaining low birth rates, but it is also controversial because of contrasts between different estimates. Published figures on the proportion of women projected to remain childless, among those currently of reproductive age, range as high as 28 per cent.² Childlessness sustained at such a level would almost certainly result in a further fall in the national birth rate. There is no doubt that childlessness in Australia has been increasing, but current and future levels are more uncertain. Our calculations suggest that a figure of 20 per cent childless is more likely.

The rising prevalence of childlessness in Australia is one aspect of the diversity of life cycle experience among people now in their twenties and thirties. It arises from a combination of varied phenomena including: the decline of social pressures

to marry and bear children, inability to find a partner, lack of interest in finding a partner, insufficient commitment in relationships, concern about the durability of relationships, financial problems and constraints, dislike of children, postponement of childbearing, declining fecundity at older ages of family formation, and pursuit of consumerist or careerist lifestyles for their own sake, rather than in conjunction with familism. Proposed general explanations of contemporary childlessness refer to individual self-fulfilment as the underlying motivation, but this glosses over the diversity and mutability of human motivations. Similarly, the notion that childlessness today is mainly voluntary, whereas in the past it was mainly involuntary,³ overlooks the mixing of voluntary and involuntary factors, the difficulties in differentiating the two, and the effects of *post hoc* rationalisation in accounts of individual situations.

This paper takes stock of the proportions remaining childless in Australia today, in the light of developments through time, both here and overseas. The aims are to clarify (i) the reliability of contemporary estimates, (ii) when and why changes have occurred and (iii) whether the present-day proportion childless represents a new departure.

HIGHS AND LOWS IN AUSTRALIA

Contemporary high and rising levels of childlessness pose the question of whether such a situation is unprecedented. To answer this question historical data are needed that circumvent, as far as possible, problems in census statistics on childlessness, since the census is our only source of such information. The problems mainly entail changes through time in the scope of census questions on the number of children women have borne,⁴ and age-related changes in the proportions of women not answering such questions.⁵

Our most reliable statistics on childlessness in the nineteenth and early twentieth centuries derive from the 1961 and earlier censuses, which provide information on the proportion of wives childless when the cohorts were middle aged, except for a few cohorts born before the 1880s. Since these censuses collected information only for currently married women, the statistics on childlessness need to be augmented to include the contributions to overall childlessness of the previously married and the never married. It was assumed, on the basis of detailed information for some cohorts, that 95 per cent of the never married were childless and that the widowed and other previously married women had the same proportions childless as the currently married.

Table 1 shows the derivation of the estimates of childlessness for cohorts

born between mid-year 1851 and mid-year 1951, which includes the cohorts with particularly high levels of childlessness. The estimates use statistics on numbers by marital status in each cohort at ages 45-49, from census data and the Australian Demographic Databank.⁶ Column F shows the percentage of wives in each cohort who were childless at ages 45-49 or thereabouts. Around 21 per cent of wives born in the 1890s and early 1900s remained childless. Childlessness among wives, however, is a misleading indicator of the overall proportions childless in cohorts with high proportions never married. Adding in the never married, together with the previously married, raises the overall level of childlessness appreciably (Table 1, Column J).

The estimates in the second last column of Table 1 confirm that Australia is not yet at record levels of childlessness. The highest figures are around 30 per cent for the cohorts born in the 1890s and early 1900s. This peak is better regarded, however, as a discontinuity rather than a valid period for comparison. The discontinuity arose from the impact of exceptional events — the two World Wars and the Great Depression — which disrupted the cohorts' prime years of family formation. The peak reflects that high proportions of the married bore no children at a time when relatively high proportions never married at all.

Australia in the late nineteenth century had a 'European marriage pattern' entailing late marriage and high proportions never marrying.⁷ Late marriage was associated with the ethic of the economically proper time to marry — when people could afford a home and a commitment to child-rearing. In cohorts born in the second half of the nineteenth century, between 10 and 16 per cent of women never married (Table 1, Column K). This

Table 1: Estimated total percentages childless around ages 45-49 in female cohorts born 1851-1951, Australia

Female Birth Cohort	Age in 1996	Total Cohort (no.)	Never Married (no.)	Ever Married (no.)	% Currently Married Childless ¹	Never Married Childless (no.)	Ever Married Childless (no.)	Total Childless ² (no.)	% Childless ²	% Never Married
A	B	C	D	E	F	G	H	I	J	K
1851-56		65,888	6,444	59,444	12.22	6,122	7,264	13,386	20.3	9.8
1856-61		90,364	10,850	79,514	11.40	10,308	9,065	19,372	21.4	12.0
1861-66		109,242	14,928	94,314	11.42	14,182	10,771	24,952	22.8	13.7
1866-71		124,123	19,745	104,378	11.22	18,758	11,711	30,469	24.5	15.9
1871-76		137,243	22,132	115,111	11.55	21,025	13,295	34,321	25.0	16.1
1876-81		157,724	24,323	133,401	10.35	23,107	13,807	36,914	23.4	15.4
1881-86		184,761	26,572	158,189	10.07	25,243	15,930	41,173	22.3	14.4
1886-91		213,322	29,789	183,533	10.44	28,300	19,161	47,460	22.2	14.0
1891-96		227,474	30,737	196,737	20.74	29,200	40,803	70,003	30.8	13.5
1896-01	95-99	225,594	29,048	196,546	21.50	27,596	42,257	69,853	31.0	12.9
1901-06	90-94	239,677	28,213	211,464	20.84	26,802	44,069	70,871	29.6	11.8
1906-11	85-89	276,736	26,468	250,268	18.53	25,145	46,375	71,519	25.8	9.6
1911-16	80-84	321,941	23,724	298,217	14.70	22,538	43,838	66,376	20.6	7.4
1916-21	75-79	334,639	19,842	314,797	13.28	18,850	41,805	60,655	18.1	5.9
1921-26	70-74	381,913	18,604	363,309	10.27	17,674	37,312	54,986	14.4	4.9
1926-31	65-69	379,541	16,962	362,579	6.32	16,113	22,915	39,028	10.3	4.5
1931-36	60-64	352,132	14,447	337,685	5.27	13,725	17,796	31,521	9.0	4.1
1936-41	55-59	399,080	17,239	381,841	4.86	16,377	18,557	34,935	8.8	4.3
1941-46	50-54	491,464	24,604	466,860	6.10				9.9	5.0
1946-51	45-49	629,874	35,582	594,292	5.77				10.5	5.6

¹ Using data for birth years nearest to regular five year intervals, and data for ages 45-49 years, or as close as possible (from 1961 Census, *Statistician's Report*, pp. 382 & 384 and later censuses).

² Excluding effects of child mortality.

Sources: Population censuses: 1961 (cohorts born 1851-1916), 1971 (cohorts born 1916-26), 1981 (cohorts born 1926-36), 1986 (cohort 1936-41 cohort), 1991 & 1996 (cohorts born 1941-51, proportions childless from 1996 Household Sample File); H. P. Brown and A. R. Hall, *Australian Demographic Databank, Vol II: Population Estimates and Demographic Rates 1921-1976*, Research School of Social Sciences, ANU

reflected circumstances in the Australian colonies such as 'insecurity of employment, the rarity of family settlement on the land and the relative concentration of males in remote pastoral areas'.⁸

Although no new record is in sight, the present upward shift in the proportions childless may still seem surprising in contrast to the relatively low figures for the cohorts born in the second quarter of the twentieth century. They became the parents of the baby boom generation. Their experience, however, represents another discontinuity in the historical record, rather than a 'typical' point of

reference. The baby boom was exceptional because it arose from unusually high proportions marrying and having children. The prime years of family formation of the 1926-51 cohorts coincided with what Betty Friedan called the era of 'the happy housewife heroine', a time of idealisation of marriage, the nuclear family and domestic life. Social norms at the time probably pressured many into assuming 'traditional' family roles because there were few socially acceptable, or economically viable alternatives, especially for women. Whereas the peak in childlessness coincided with a time

when high proportions stayed single, the low point resulted from a reversal to a situation of almost universal early marriage. For the parents of the baby boom, the ethic of the economically proper time to marry no longer held sway, and early marriage was a means to independence, sexual experience and social conformity.

CROSS-NATIONAL COMPARISONS

If we set aside the highs and lows in the historical record, 15 to 20 per cent childless seems unexceptional. Nevertheless, it is also clear that levels of childlessness have been subject to considerable variations through time. A striking feature of these changes is that they have parallels in other countries, implying similar underlying causes.

The United States is the only country for which there are comparable data on the childlessness of nineteenth century cohorts. As in Australia, the percentages childless, among white women, increased from cohort to cohort, reaching a peak near 25 per cent for women born at the turn of the twentieth century. Rising marital childlessness was the main factor in the overall increase in both countries. The Australian figures are higher for every cohort, principally because remaining single was more prevalent in Australia than in the United States. For example, in the female cohorts born in the early 1890s, 13 per cent remained never married and childless in Australia, compared with about nine per cent in the United States.⁹

In Australia, the United States and at least parts of Europe, the proportions childless declined among cohorts born after the early 1900s. Twenty-five per cent childless was evidently a typical peak from which the decline ensued. In most countries, minimum levels — around 10 per cent — occurred in the

1940s birth cohorts. The fall in childlessness was associated with the twentieth century ‘marriage revolution’, which overturned the European marriage pattern and brought higher proportions marrying. The ‘revolution’ was most marked during the baby boom years following the Second World War, when early marriage and early childbearing were common. The baby boom was most conspicuous and prolonged in the United States and Australia, resulting in the parent cohorts having lower proportions childless than corresponding cohorts in Europe (Figure 1).

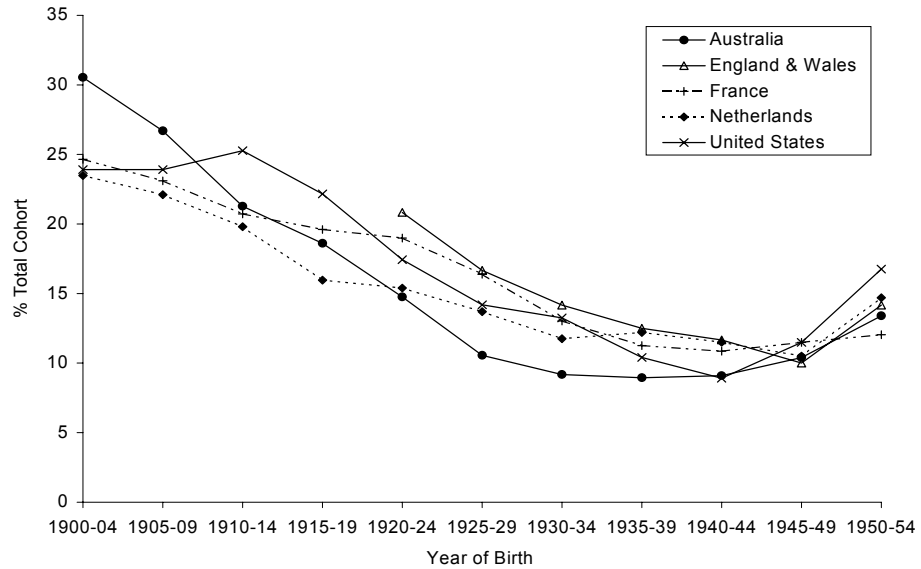
The revival of childlessness in the 1950s birth cohorts, who started coming of age in the late 1960s, was associated with the availability of the contraceptive pill, wider access to safe methods of abortion and the equalisation between the sexes of opportunities for non-familial roles.¹⁰ The upswing in childlessness in the 1950s cohorts has been consistent across almost all Western countries for which time series data on childlessness are available.¹¹

THE FUTURE OF CHILDLINESS

Recent estimates of future levels of childlessness suggest that the recent upswing will continue. McDonald, for example, uses intercensal changes in the proportions childless to conclude that 22 per cent of women currently aged 30 or so will remain childless.¹² The Australian Bureau of Statistics (ABS) have recently estimated that 28 per cent of all women now entering their childbearing years will never have children.¹³

However, estimating the current and future level of childlessness in Australia is a complicated exercise for two main

Figure 1: Total percentages childless at ages 45-49 in female cohorts born c 1900-1954, selected countries



Source: D. T. Rowland, 'Historical trends in childlessness', in P. A. Dykstra and V. R. A. Call (Eds), *Ageing Without Children: A Cross-national Handbook on Childlessness in Late Life*, Greenwood Press, Westport, CT, (forthcoming)

reasons. First, existing data sources on which such estimates are based have a number of limitations and, second, assumptions need to be made about the fertility behaviour of women who are still in their childbearing years.

In most analyses of fertility, birth registration data are combined with estimates of the resident population to yield age-specific fertility rates. Analyses of childlessness ideally require birth registration data tabulated by parity of woman (that is, the number of children she has already borne) to obtain meaningful first-order birth rates. Unfortunately, vital registration systems in Australia do not record parity accurately. Historically, only first nuptial births were identified and, more recently, published information on births in Australia identify only the first birth in the current relationship. In both cases, the potential for women to be recorded as having multiple 'first' births

significantly and adversely affects the utility of vital registration data for the analysis of childless women.

As a result, researchers have looked to census data on children ever born to provide information on levels of childlessness. The previous sections highlighted problems associated with missing data for census questions about total issue or children ever born. The standard practice adopted by the ABS is to exclude the 'not stated' category when calculating percentages or rates. Implicit in this practice is the assumption that the proportion childless among women who did not state how many children they had borne is identical to that among women whose total issue was reported. Although higher proportions of never married women do not answer this question, the treatment of the not stated group appears to affect childless estimates at older ages only, and has little impact on the total

figure for Australia. In 1996, approximately one-third of all women were childless at the time of the Census.

Lifetime childlessness

Of course, estimates of childlessness based on the proportion of women who were childless at the time of the census can only be considered indicative of the true situation among older cohorts. Lifetime childlessness for cohorts that are still in their childbearing years, especially women who have not yet had their first birth at the time of the census, needs to be estimated. To do this, estimates must be based on assumptions about the future fertility behaviour of these women. Unfortunately, predictions about future fertility behaviour are often incorrect, especially since the fertility intentions of women are often not realised. It is important, therefore, to note that there is considerable uncertainty in estimates, particularly as most assume that current age-specific fertility rates will remain constant in the long term — an unlikely situation. Even acknowledging this fact, estimates based on the same assumptions can vary according to the particular methods used. This section examines the recent ABS estimate of lifetime childlessness and, using the same data source, offers an alternative methodology which yields a much lower figure.

The ABS used data from the Midwives' Collection¹⁴ to estimate the proportion of women that will ultimately remain childless. The advantage of this collection over birth registration data is that the former records the parity of mother at each birth (rather than that in the mother's current relationship), allowing calculation of first ever birth rates.

In calculating their estimate, the ABS used age-specific first birth rates in 1996 to compute a total first birth rate of 721.3

per 1000 women. They then conclude that '72 per cent of women will have a first birth, therefore implying that 28 per cent of women will not have children'.¹⁵ The ABS method is similar to the calculation of a total fertility rate (TFR) and, as a result, their estimate suffers from the same limitations that characterise the TFR. Both are cross-sectional measures which are used to describe what is essentially a cohort phenomenon (see McDonald in this issue for an explanation of the difference between cross-sectional and cohort measures of fertility). Thus, the estimate of 28 per cent is based on the assumption that current age- and birth-order-specific rates will remain constant across the reproductive life-span of a cohort of potential mothers. In other words, of women aged 15 in 1996, the proportion that will have their first child in 2001, 2006 and 2011 (at ages 20, 25 and 30) is assumed to be the same as the proportion of women who, in 1996, had their first child at age 20, 25 and 30.

However, in an era in which first births are being delayed, such an assumption is invalid. Cross-sectional changes in the timing of first births will cause fluctuations in the total first birth rate from year to year. More importantly, however, it will be artificially high if particular cohorts are putting off the decision to have children. Figure 2, which presents age-specific first birth rates from the Midwives' Collection from 1991 to 1997, suggests that delay is occurring. The most visible changes have occurred among women aged 20-24 (whose first birth rate fell by 15 per cent from 1991 to 1997) and 30-34 (whose first birth rate rose by 24 per cent over the period). However, the greatest increase in first birth rates occurred among 35-39-year-old women — an increase of 42 per cent (from seven per

1000 in 1991 to ten per 1000 in 1997). As the postponement of the first birth by women is not adequately accounted for, the estimate that 28 per cent of women aged 15 in 1996 will ultimately remain childless is unlikely to be reached.

Leaving aside difficulties associated with holding current first-order birth rates constant, the way in which lifetime childlessness is calculated can lead to substantially different results because of the cross-sectional nature of available data. To illustrate this point, an alternative method of calculation — the life table method — is presented which, while using the same assumption of constant first-order birth rates and the same data on the number of first births from the Midwives' Collection, yields a substantially lower figure of lifetime childlessness.

The main difference between the ABS method of calculating lifetime childlessness and the life table method is the way in which age-specific first birth rates are calculated. The ABS used, for each age group, the total first births in the given year (1996) divided by the total number of women. Thus the denominator includes women who had already borne a

child and, therefore, were not strictly at risk of having a first birth.

The basic principle of the life table method is that the first birth rate in each age group is based on the mid-year population at risk — that is, women who were childless (and thus at risk of having a first birth) in 1996. These rates, in effect, are equivalent to the age-specific death rates (${}_nM_x$) found in life tables.

Having calculated the age-specific first birth rates based on the mid-year population at risk,¹⁶ an abridged life table¹⁷ can be constructed to represent the first birth experience of a hypothetical cohort of 100,000 women who were aged 15 in 1996. The resulting life table is presented in Table 2. The ${}_nI_x$ column of the table denotes the number of women who were childless at the start of each age group, assuming that all women aged 15 are childless to begin with. The table shows that 19,700 women (of the original 100,000) remained childless at the end of their reproductive life span. Therefore, if the age-specific first birth rates observed in 1996 were held constant for all age groups, only 19.7 per cent of women aged 15 in 1996 would be childless at their 45th birthday.

Table 2: Estimates of cohort childlessness using life table analysis, Australia, 1996

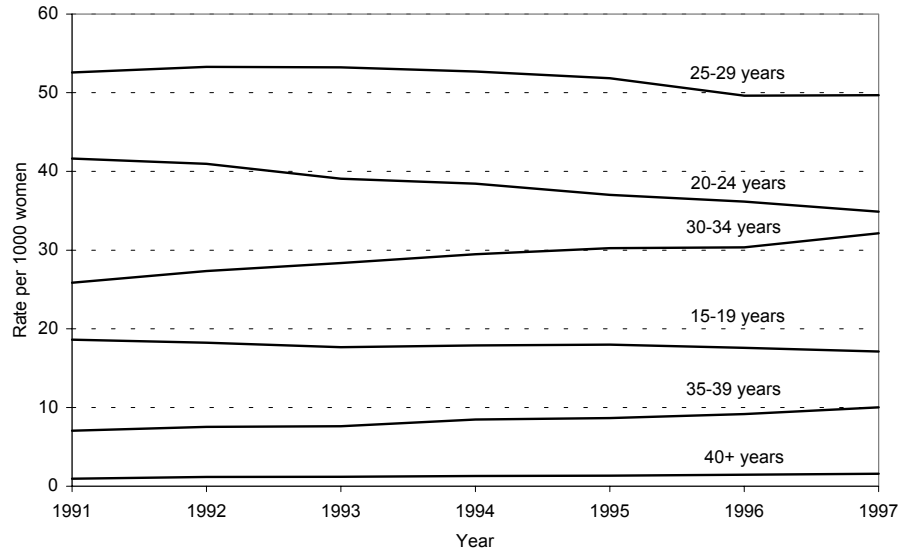
Age	Childless women at the start of each age group ${}_nI_x$	Age-specific first birth rate ${}_nM_x$	Probability of having a first birth in each age group ${}_nq_x$	Probability of remaining childless at the end of each age group ${}_nPx$	Observed number of first births ¹	Mid-year female childless population ²
15–19	100,000	0.01823	0.08741	0.91259	10,967	601,656
20–24	91,259	0.04436	0.20048	0.79952	24,888	561,108
25–29	72,963	0.08801	0.36098	0.63902	35,113	398,941
30–34	46,625	0.10402	0.41193	0.58807	21,979	211,296
35–39	27,419	0.05406	0.23908	0.76092	6,679	123,557
40–44	20,863	0.01134	0.05523	0.94477	997	89,943
45–49	19,711	0.00000	0.00000	1.00000	0	68,963

¹ From 1996 Midwives' Collection. Cases in which parity of woman was not stated were assigned a parity according to the known distribution.

² From Estimated Resident Population, 30 June 1996 (see reference ¹⁶ for more information).

Sources: ABS 1996 Census of Population and Housing, unpublished data; P. Day, E. A. Sullivan and P. Lancaster, *Australia's mothers and babies 1996*, AIHW Catalogue no. PER 4, Sydney, 1999, AIHWNPSU (Perinatal Statistics Series No. 7)

Figure 2: First-order birth rates per 1000 women, Australia, 1991-1997



Note: Cases in which parity of woman was not stated were assigned a parity according to the known distribution.

Sources: P. Lancaster, E. Pedisich and E. Shafir, *Australia's mothers and their babies 1991*, Australian Institute of Health and Welfare National Perinatal Statistics Unit (AIHWNPSU), (Perinatal Statistics Series No. 1), Sydney, 1995; P. Lancaster, E. Huang and E. Pedisich, *Australia's mothers and their babies 1992*, AIHWNPSU, (Perinatal Statistics Series No. 2), Sydney, 1996. P. Lancaster, Lin and E. Huang, *Australia's mothers and their babies 1993*, AIHWNSU (Perinatal Statistics Series No. 3), Sydney, 1996; P. Day, P. Lancaster and E. Huang, *Australia's mothers and babies 1994*, AIHW Catalogue no. PER 4, AIHWNSU, (Perinatal Statistics Series No. 5), 1997. P. Lancaster, P. Day, and E. Huang, *Australia's mothers and babies 1995*, AIHW Catalogue no. PER 4, AIHWNPSU (Perinatal Statistics Series No. 6); P. Day, E.A. Sullivan and P. Lancaster *Australia's mothers and babies 1996*, AIHW Catalogue no. PER 4, AIHWNPSU, (Perinatal Statistics Series No. 7), Sydney, 1999; P. Day, E. Sullivan, J. Ford and P. Lancaster *Australia's mothers and babies 1997*, AIHW Catalogue no. PER 12, AIHWNPSU, (Perinatal Statistics Series No. 9). Sydney, 1999

The life table also shows the probability of having a first birth within each age group (${}_nq_x$) and the probability of remaining childless at the end of each age group (${}_np_x$), assuming that the observed age-specific first birth rates remain constant throughout the life of a group of women aged 15 in 1996. Using the survival probabilities (${}_np_x$), we can see that the majority of women (59 per cent) who are childless at the age of 30 are unlikely to have a child by their 35th birthday. Conversely, using the first birth probabilities (${}_nq_x$), women who do not

have a child by the time they are 30 have a 41 per cent chance of having their first child before they turn 35.

Evaluating methods of calculating lifetime childlessness

The ABS method of calculating age-specific first birth rates based on all women, rather than women at risk of having a first birth, has the effect of reducing the apparent first birth rates. Summing these rates (Table 3) results in a relatively low estimate of the total women ever having a first birth, and

Table 3: Comparison of age-specific first birth rates and first birth probabilities from the Midwives' Collection, ABS and life table method of calculation, Australia, 1996

Age	First birth rate per 1000 women		Probability of having a first birth within the age interval	
	based on total resident population (ABS method)	based on population at risk (Life table method)	ABS method	Life table method
15-19	17.6	18.2	0.088	0.087
20-24	36.1	44.4	0.198	0.200
25-29	49.6	88	0.339	0.361
30-34	30.3	104	0.314	0.412
35-39	9.1	54.1	0.138	0.239
40-44	1.5	11.3	0.026	0.055
Total per cent experiencing a first birth	72.1	80.3	-	-

Note: The life table method uses adjusted data from the 1996 Midwives' Collection in which cases of unknown parity were assigned a parity according to the known distribution. The data adjustment has negligible effect on the differences between parameters obtained from the two methods presented in the table.

Sources: *Births Australia 1998*, ABS, Catalogue no. 3301.0; 1996 Census of Population and Housing, unpublished data, ABS, 1996; P. Day, E. A. Sullivan and P. Lancaster, *Australia's mothers and babies 1996*, AIHW Catalogue no. PER 4, Sydney, 1999

consequently a high estimate of the proportions remaining childless.

The life table method and the ABS method yield very similar results when used with real cohort data.¹⁸ However, McDonald has shown that when using synthetic cohort data (as is the case here), the method adopted by the ABS is particularly sensitive to cross-sectional fluctuations and produces greater variability in estimates than does the life table method.¹⁹ Although both methods have limitations when applied to cross-sectional data, the life table method is considered to give a closer approximation to the true rate of lifetime childlessness.

Lifetime childlessness of women currently in their childbearing years

It must be remembered that the life table analysis reported above relates to a fictitious cohort of 15 year-old

women (as does the ABS estimate). However, the resulting survival function (${}_n p_x$) from the life table presented in Table 2 can be applied to the observed proportions who were childless at the 1996 Census. In doing so, the proportion of women currently in their childbearing years who can expect to remain childless can be estimated. This approach uses the actual fertility experience of these women up to the time of the 1996 Census and, as a result, estimates for older women are only partially based on observed cross-sectional fertility assumptions.

Table 4: Estimated lifetime childlessness for currently childless women, Australia

Exact age	% childless at							
	1996	2001	2006	2011	2016	2021	2026	2031
15	100.0							
20	90.2	91.3						
25	70.3	72.1	73.0					
30	40.2	44.9	46.1	46.6				
35	20.9	23.7	26.4	27.1	27.4			
40	14.4	15.9	18.0	20.1	20.6	20.9		
45	11.5	13.6	15.0	17.0	19.0	19.5	19.7	
50	10.2	11.5	13.6	15.0	17.0	19.0	19.5	19.7

Sources: Census of Population and Housing, unpublished data, ABS, 1996; P. Day, E. A. Sullivan and P. Lancaster *Australia's mothers and babies 1996*, AIHW Catalogue no. PER 4, AIHWNPSU, (Perinatal Statistics Series No. 7), Sydney, 1999

Table 4 presents the results of this exercise. For the cohort of women aged 15 in 1996, the percentage remaining childless is consistent with the n_{1x} column in Table 2. As shown, lifetime childlessness in Australia is expected to be between 19 and 20 per cent among women aged 20 and 25 at the 1996 Census and 17 per cent among women aged 30 at the 1996 Census.

CONCLUSION

Despite the uncertainty in predicting the actual future level of childlessness, the proportion of women who will ultimately never have children will most certainly increase. The combination of delayed childbearing and declining fecundity after the age of 35 years²⁰ will result in higher levels of lifetime childlessness than those that have characterised Australia's recent past. Whether we will see a return to the levels recorded in the 1930s and 1940s remains unknown, but unlikely in the short term. A more probable scenario will see one in five women currently entering their childbearing years remaining childless. Although our estimate of 19.7 per cent remaining childless depends on constant rates through time, it is unlikely that counter-trends — such as the effects of delayed childbearing — will curb the gradual increase in childlessness being observed in Australia and other countries.

Recent media coverage of the increasing number of women remaining childless has suggested that contemporary childlessness is a clear choice of lifestyle — a preference for the pursuit of individual satisfaction and a rejection of family obligations. However, this scenario describes a small proportion of voluntarily childless women. In reality, very few women decide at an early age to remain childless — most remain childless after a long series of postponements.²¹ In

fact, a recent survey of Australian attitudes has found that childlessness is considered the ideal lifestyle for only one per cent of Australians and only seven per cent said they would have no children if they could start their life over.²² Menken argues that rather than being a consequence of increased selfishness, low fertility and childlessness may be 'reasonable responses to the demographic changes that have altered the structure of family dependency' — that is, the perceived need to support elderly parents as well as children.²³ The impact of external constraints on childlessness, such as subfecundity, marital breakdown or the inability to find a suitable partner, have not been measured adequately in Australia. The discontinuity between fertility ideals and actual behaviour suggests that chance factors may also contribute to increasing childlessness.

The present trend towards increasing childlessness differs from past experience, where high levels of childlessness among cohorts born around the turn of the twentieth century were associated with married childlessness together with relatively high proportions of women remaining unmarried and unpartnered. Today, an additional feature is the large number of childless de facto partnerships. Moreover, women in the early cohorts who were childless had many contemporaries who still had relatively large families. In the 1901-06 cohort, for example, nearly 40 per cent of wives bore three or more children. The impact of childlessness on the total fertility rate is now much more pronounced because a smaller proportion of mothers have more than two children. Without a rise in the proportion of women having larger families, Australia's already below replacement fertility will decline even further.

References

- ¹ The authors are very grateful for advice on this paper from Shailendra Jain and Peter McDonald.
- ² *Births Australia 1998*, Australian Bureau of Statistics (ABS), Catalogue no. 3301.0; Australian Demographic Statistics, September Quarter 1999, ABS, Catalogue no. 3301.0.
- ³ D. L. Poston, and K. Trent, 'International variability in childlessness: a descriptive and analytical study', *Journal of Family Issues*, vol. 3, no. 4, 1982, pp. 473–491.
- ⁴ Statistics on childlessness might be expected to be fairly accurate for women beyond the reproductive ages. Nonetheless, the figures are subject to uncertainty because of differences between the scope of census questions and the effect of the issue 'not stated' category. The *Statistician's Report* on the 1961 Census (p. 385) notes, for example, that "since many of the "not stated" issue may in fact have been childless, the proportions childless may thus be understated in varying degrees". Until 1971, census statistics on issue and childlessness were collected only from currently married women, making it necessary to estimate figures for the never married, the widowed, separated and divorced. The 1971 and 1976 Censuses widened the scope of the inquiry to the issue of all marriages, but still excluded the never married. Since 1981, the census has sought information on the issue of all women so that, in principle, there are no missing categories. In practice, however, the issue 'not stated' category has persisted, thereby maintaining uncertainty about the full extent of childlessness. Estimates of childlessness can differ appreciably depending on whether the 'not stated' are omitted or distributed between categories of family size
- ⁵ At the 1996 Census, the percentage of middle aged and older women who did not state their number of children rose continuously from 3.7 per cent at ages 45–49 to 10.3 per cent at 70–74 and 20.4 per cent at 85 and over. In the oldest age groups, the numbers with issue 'not stated' were equal to or greater than the numbers who indicated they had no children. It is likely that many older women, especially the never married or otherwise childless, thought the question irrelevant to them. Also, since the proportion in aged care institutions rises with age, the 'not stated' category expanded further because some could not provide the information. In 1996, 27 per cent of the 'not stated' aged 65 and over were in non-private dwellings (mainly in institutions), compared with 64 per cent at ages 85 and over. Thus it appears that omitting the 'not stated' when calculating percentages will result in an underestimate of childlessness in the older cohorts.
A further complication is that the stated proportions childless in cohorts has fallen in their later years. For example, 13.3 per cent of the ever married in the cohort born in 1916–21 were childless at the 1971 Census (at ages 50–54, excluding the not stated) compared with 8.2 per cent at the 1996 Census (at ages 75–79, excluding the not stated). Compositional changes, especially family reunion — migration of widows, could partly explain this, since their arrival would augment the number of mothers in a cohort. It is also likely that relatively more of the childless did not answer the relevant question in the 1996 Census. Given these sources of uncertainty, it is more accurate to measure a cohort's level of childlessness when its members were just beyond child-bearing age. This approach was used in reconstructing levels of childlessness through time in Australia, even though the figures necessarily differ from those in the 1996 Census. Making the assumption that at ages 70 and over, around half of the 'not stated' in 1996 were childless would bring the census figures for their cohorts into closer alignment with the historical estimates. If it is assumed that 50 per cent of the not stated group were actually childless at the 1996 Census, the estimated proportions childless for women are 24.5 per cent aged 85+; 20.0 per cent aged 80–84; 17.3 per cent aged 75–79; 15.0 per cent aged 70–74; 13.0 per cent aged 65–69; and 11.5 per cent aged 60–64.
- ⁶ H. P. Brown and A. R. Hall, *Australian Demographic Databank, Vol II: Population Estimates and Demographic Rates 1921-1976*, Research School of Social Sciences, ANU, 1979
- ⁷ P. F. McDonald, *Marriage in Australia: Age at First Marriage and Proportions Marrying 1860-1971*. Australian Family Formation Project Monograph No. 2, Department of Demography, The Australian National University, Canberra, 1975, p. 134,
- ⁸ P. F. McDonald, 'Marriage and divorce in Australia', in United Nations, *Population of Australia*, Country Monograph Series No. 9, United Nations, New York, 1982, p. 185
- ⁹ S. P. Morgan, 'Late nineteenth and early twentieth-century childlessness', *American Journal of Sociology*, vol. 97, no. 3, 1991, pp. 781-4; D. T. Rowland, 'Historical Trends in Childlessness', in P. A. Dykstra, and V. R. A. Call, (Eds), *Aging without children: A cross-national handbook on childlessness in late life*. Greenwood Press, Westport, CT, (forthcoming)
- ¹⁰ D. L. Poston and E. Gotard, 'Trends in childlessness in the United States, 1919-1975', *Social Biology*, vol. 24, no. 3, 1977, pp. 212-224
- ¹¹ Rowland, forthcoming, op. cit.
- ¹² P. McDonald, 'Contemporary fertility patterns in Australia: first data from the 1996 Census', *People and Place*, vol. 6, no. 1, 1998, pp. 1-13
- ¹³ *Australian Demographic Statistics, September quarter 1999*, ABS Catalogue no. 3101.1, p. 9, *Births Australia 1998*, ABS Catalogue no. 3301.0, p. 43.
- ¹⁴ The Midwives' Collection is a national database compiled from State/Territory perinatal collections by the Australian Institute of Health and Welfare's (AIHW) National Perinatal Statistics Unit of the University of New South Wales. State/Territory perinatal collections are obtained from notification forms for each birth

which are usually completed by midwives or sometimes by medical practitioners. There is some under-reporting of home births in the collection. The extent of the undercount is unknown as the time lag between the notification and official registration of a birth makes it difficult to reconcile the number of births recorded in the collection with vital registration data on births. See *Births Australia 1998*. ABS Catalogue no. 3301.0; and P. Day, E. A. Sullivan and P. Lancaster, *Australia's mothers and babies 1996*, Catalogue no. PER 4. Sydney, AIHW, National Perinatal Statistics Unit (Perinatal Statistics Series No. 7), 1999

¹⁵ ABS, Catalogue no. 3101.1, p. 9

¹⁶ In this analysis, the mid-year population at risk is obtained by applying the proportion of women at the 1996 Census who were childless at each age to the Estimated Resident Population of women at 30 June 1996. This adjusts for census under-enumeration to yield more accurate estimates of childless women in each age group. The proportion of childless women in each age group observed at the 1996 Census was adjusted to take into account women who did not answer the question on children ever born (CEB) using the known marital status and parity distribution from the 1996 Census 1 per cent Household Sample File. The proportion of the not stated population assumed to be childless is depicted in the following equation: $A_i B_i + C_i D_i$ where A is the proportion of never married women in age group i who answered the CEB question and who were childless; B is the proportion of never married women in age group i who did not state their issue; C is the proportion of ever married women in age group i who answered the CEB question and who were childless; and D is the proportion of ever married women in age group i who did not state their issue.

¹⁷ Data on the number of first births from the Midwives' Collection were not available by single year of age at the time of writing. As a result, an abridged life table has been calculated using the Reed-Merrell method of calculating ${}_nq_x$ from ${}_nM_x$

¹⁸ Indeed, if we assume that the observed number of first births by age in 1996 came from a single cohort of 610,000 women (approximately equivalent to the number of women aged 15-19 at the 1996 Census), in the absence of mortality and migration, the ABS method of calculation would yield a total percentage of women ever having a first birth of 82 per cent — equivalent to a lifetime childless rate of 18 per cent.

¹⁹ McDonald, 1975, op. cit.

²⁰ L. Toulemon, 'Very few couples remain voluntarily childless', *Population: An English Selection*, vol. 8, 1996, pp. 1-28; J. Menken, 'Age and fertility: how late can you wait?' *Demography*, vol. 22, no. 4, 1985, pp. 469-483

²¹ J. Veevers, *Childless by Choice*, Butterworth Pty. Ltd., Sydney, 1980

²² M. Evans and J. Kelley, 'Small families or large? Australia in international perspective,' *Australian Social Monito*, vol. 2, no. 1, 1999, pp. 13-19

²³ Menken, 1985, op. cit., p. 481