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LOW FERTILITY IN AUSTRALIA: EVIDENCE, CAUSES AND POLICY RESPONSES

Peter McDonald

Fertility in Australia is low and may well fall further. Why? McDonald discounts theories based on 'post-materialist values' and argues that most young women want at least a two-child family. Fertility is low because of the high cost of children, the risk of making long-term commitments in the face of an uncertain future, and the uneven nature of gender equity.

This third reason is important. Women are treated as equals in the education system and the labour market, provided they participate as individuals. But once they become mothers they are more often treated as members of families, families headed by a male breadwinner. This is especially true as far as taxation and welfare are concerned. In these circumstances gender equity suffers. McDonald's policy suggestions focus on gender equity: we need family-friendly work places, child-care reform and reform of the taxation system.

Current arrangements reward stay-at-home mothers and mothers who work full-time. They penalise those who prefer a balanced compromise. If we persist in ignoring the needs of this group of women fertility will continue to fall.

In the essay from which his article in this issue of *People and Place* derives, David Coleman,[1] after a comprehensive review of explanations of low fertility, concludes that low fertility is 'a problem of considerable intellectual and practical importance'. I agree. For the past two decades, annual fertility rates in almost all industrialised countries have been below an average of two children per woman, the level that ensures replacement of the population in the long term. In Japan, Southern Europe, the Germanic countries, and most countries of Eastern Europe, fertility is under 1.4 children per woman, considerably below the level that ensures long term replacement of the population. Acceptance of this situation as a problem has been slow, is by no means universal, but is growing. Complacency in regard to low fertility has been partly due to a poor understanding of population dynamics and to something of an act of faith that the phenomenon is temporary.

Although the demography involved is simple, the devastating impact of sustained very low fertility upon populations has taken time to be accepted. To illustrate the point, I use the example of a population in which average fertility is one child per woman. This is only slightly below the level applying in several countries today. At one child per woman, each generation is half the size of the previous generation, and a demographic generation is about 30 years in

length. That is, in a mere 90 years, the size of the generation will be only one eighth of the original generation. A population with very low fertility rapidly develops a very old age structure that has a considerable momentum for further population decline. There is no question that this would be a severe problem for the country concerned.

THE DEMOGRAPHY OF LOW FERTILITY: CROSS-SECTIONS AND COHORTS

While there can be little argument about the devastating impacts of sustained low fertility, there is disagreement among demographers about whether or not the low fertility of the past two decades is a temporary phenomenon. When fertility, measured on an annual basis, touched replacement level for a year or two in the 1930s, expressions of concern were immediate. In retrospect, we can say that the concern at that time was largely unjustified because the situation was a temporary aberration caused by the impact of depressed economies upon marriage. When prosperity returned, all these countries had a baby boom of varying proportions. The argument today, however, is not that low fertility is due to the cross-sectional impact of an economic crisis, but that it derives from the gradual development of a new life course pattern in which women have their children at much later ages than in the past. In the transition from the old to the new age pattern of childbearing, women over a range of younger ages may be delaying their births simultaneously. The simultaneity of lower fertility across women of different ages leads, temporarily, to low annual, or cross-sectional, fertility rates. This argument continues that, in time, births postponed will occur and cross-sectional fertility will return to about two children per woman.

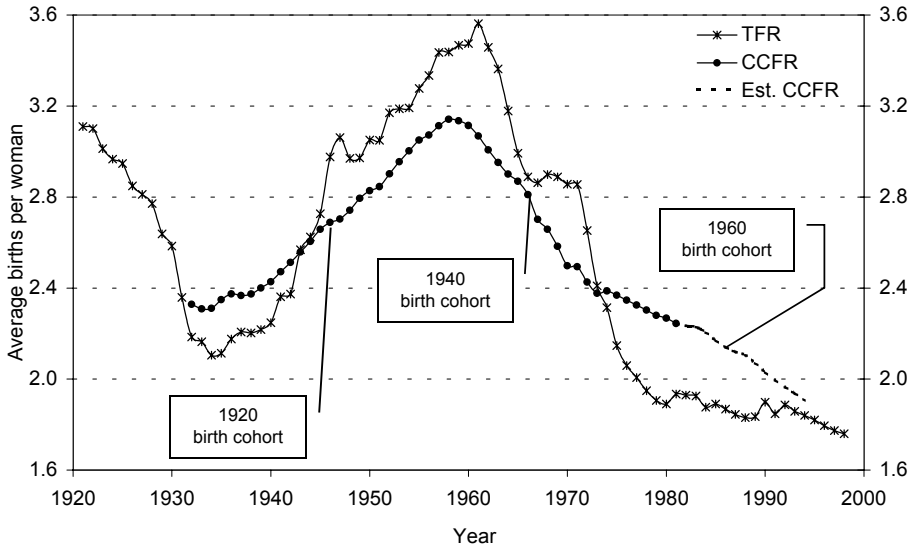
At the heart of this issue is the difference between cohort (or lifetime) measures and cross-sectional (or annual) measures. We think about fertility in terms of the number of children that women have during their lifetime. Lifetimes are spread across time so that the best way to measure behaviour across lifetimes is to follow a group of women through time. For example, we could consider all women born in 1940 and see how many children this group (or cohort) of women had had on average by the time they were aged 45 years (that is, by 1985). In Australia, women who were born in 1940 had had an average of 2.81 births by age 45. Likewise, women born in 1950 had had an average of 2.35 births by age 45. These lifetime measures are referred to as cohort measures or, more specifically, as cohort completed fertility. The cohort completed fertility of generations of Australian women has been falling steadily beginning with the cohort born in 1932 (Figure 1).[2]

Now suppose we want to measure the average number of children born by age 45 to the cohort of women who were born in 1960. We cannot obtain this measure because women born in 1960 have not yet reached age 45. Thus, we have to project or predict the outcome for this cohort. One way to do this is to cumulate the fertility rates at each age of women born in 1960 up to the last year for which we have actual recorded data (1998, when women born in 1960 turned 38 years). By age 38, women born in 1960 had had 2.04 births on average. To this number, we could add the most recently recorded birth rates (those that occurred in 1998) at ages 39, 40, 41, 42, 43 and 44. If we do this, the predicted cohort completed fertility for women born in 1960 would be 2.14 births per

woman. This is not fully a cohort measure because it incorporates estimates obtained from the latest annual or cross-sectional data, but because the cohort is close to the completion of its childbearing, the estimate will be very accurate. We can conclude that, on a cohort basis, fertility has fallen from 2.81 births per woman for those born in 1940 to 2.14 births per woman for those born in 1960. The level of 2.14 births per woman is only slightly above the replacement rate of around 2.06. Completed cohort fertility has certainly fallen to replacement level, but the issue is whether or not this fall will continue into the future.

Next, we use the same method to predict the completed cohort fertility of women who were 30 in 1998. By age 30, they had had 1.10 births on average. If we add to this the births at ages from 30 onwards that would result on the assumption that the annual or cross-sectional fertility rates of 1998 at ages 30-44 years applied across the future of women who were aged 30 in 1998, then these women would have completed cohort fertility of 1.90 births per woman. The actual completed cohort fertility for this group will be higher than 1.90 if birth rates from age 30 onwards are higher in the future than they were in 1998. Until quite recently, we might have predicted that this would almost certainly be the case as fertility rates at ages 30 and above had been rising across time. However, in the last two years, 1997 and 1998, fertility rates in the early 30s have ceased rising. If this trend were to be sustained and if it flowed on to ages in the late 30s, then the level of 1.90 births per woman may be close to the mark. Thus, cohort fertility for the 1968 cohort can be reasonably predicted to be below replacement level. Projections of cohort completed fertility for Australia using this method are shown in Figure 1 the dashed line extension).

Figure 1: Australia, Total Fertility Rate (TFR), 1921-1998, and Completed Cohort Fertility Rate (CCFR), 1906-1968



Finally, what happens when we consider women who turned 15 in 1998. Their completed fertility to their 15th birthday is zero. Thus, if we apply the same method of estimation of completed cohort fertility for this group as we have applied for earlier groups, all of their estimated completed fertility would come from the assumption that the cross-sectional rates at each age in 1998 would continue across the lifetimes of these women, that is, through to the year 2028. The estimated cohort completed fertility would be 1.76 births per woman, by definition, the same as the 1998 cross-sectional Total Fertility Rate. The annual Total Fertility Rate is the index upon which most of the attention about the course of fertility is based. The discussion here provides an interpretation of its meaning. It is the predicted completed cohort fertility that a cohort of women at age 15 would have if, throughout their reproductive years, they experienced the same fertility rates at each age as applied in the given calendar year. It is extremely unlikely that, between 1998 and 2028, the fertility rates at each age will remain exactly the same as they were in 1998. Thus, unlike women who were 38 in 1998, there is a great deal of scope for variation in the completed cohort fertility of women aged 15 in 1998. It is this potential for future variation that is at the heart of the debate about whether the trend in cross-sectional Total Fertility Rates can be considered to be a reliable indicator of the trend in cohort completed fertility.

Figure 1 also shows annual Total Fertility Rates for Australia.[3] The comparison of cohort completed fertility and the Total Fertility Rate indicates some interesting features. The temporarily very low levels of the Total Fertility Rate in the 1930s were not matched by equivalently low cohort completed fertility. That is, although cross-sectional fertility in the 1930s fell to replacement level, no actual cohort of women in their reproductive ages at that time had replacement level fertility. The baby boom is the startling bulge in Total Fertility Rates in the middle of Figure 1 in the 1950s and 1960s. It can be seen that there was a substantial rise in cohort completed fertility for generations having their children at that time. However, the rise in Total Fertility Rates was considerably greater than the rise in cohort fertility. This came about because of a shift to much earlier childbearing related to early marriage. This led to births being 'brought forward' in time. These two examples show that the Total Fertility Rate can be above or below cohort completed fertility for essentially temporary reasons. The baby-boom example shows that the duration of this temporary phenomenon can be considerable. What we are considering now is the opposite phenomenon to the baby boom. There is a continuing major shift upwards in the age at which women are having their children. Without any change in cohort completed fertility, this shift would lead to lower cross-sectional fertility rates because several cohorts of women would be delaying their births simultaneously. However, as already observed, Figure 1 also shows that cohort completed fertility, recorded and projected in the short term, is definitely falling below replacement level.

It is evident from the above discussion that 'temporary' in demography is a long time. Cross-sectional fertility rates have been below replacement level for two decades but there is still a debate about whether this is a temporary aberration. We will not know the competed fertility of women aged 15 now for another 30 years. If indeed the fall in cross-sectional

fertility were to be purely a temporary phenomenon but the temporarily low fertility lasts across decades, there would still be a big impact upon population growth in this period. Annual population growth, as the baby-boom example indicates, is determined by cross-sectional fertility, not by cohort fertility. Temporary or not, current low fertility is having its impact upon population growth. However, if low fertility is temporary, we need not be making the more cataclysmic statements about the future of populations and we need not be investing resources to try to change the course of fertility because it would go up in time anyway.

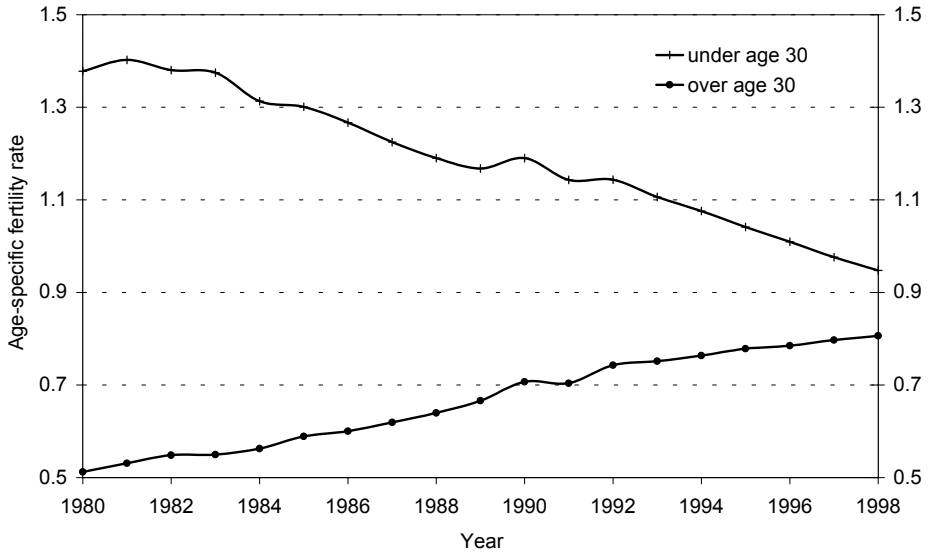
A TEMPORARY SHIFT IN THE TIMING OF BIRTHS OR A LONGER-TERM CULTURAL CHANGE?

Bongaarts and Feeney[4] have recently put the case that the fall in cross-sectional fertility is due to a temporary shift in the timing of births. This study has been widely cited, including in the media, as evidence that the fall in fertility is temporary. However, as we do if we assume that future fertility will be the same as the 1998 Total Fertility Rate, Bongaarts and Feeney assume their result. That is, they assume that all births delayed eventually occur at later ages so that there is no change in cohort completed fertility over time. This assumption ensures that when the delay in the timing of births reaches an assumed end point, cross-sectional or annual fertility rates will return to the levels that applied before the delay commenced. Lesthaeghe and Moors,[5] in a study of 41 countries, have addressed this same question by examining the extent to which falls in fertility before the age of 30 are being made up after the age of 30. They refer to this as 'recuperation'. They conclude that the general rule is that recuperation after age 30 falls well short of the falls in fertility under age 30, but that there is considerable variation across countries in the degree of recuperation. The countries with very low fertility, such as Italy and West Germany, have had very weak recuperation. Countries with relatively high fertility, such as the Nordic countries and Australia, have had relatively strong recuperation. It should be noted that Lesthaeghe and Moors say that relatively strong recuperation explains why Australia's fertility is as high as 1.76 births per woman. They are not suggesting that recuperation after age 30 would take Australian fertility rates in the near future to a level higher than this. That is, in their terms, below replacement fertility is not a temporary phenomenon, it is just much more pronounced in some countries than in others.

Recent data for Australia (Figure 2) indicate that rates of fertility above age 30 are levelling off while the rates at ages under 30 are continuing to fall sharply. From 1980 to 1991, falls in fertility rates below age 30 in Australia were almost exactly matched by rises at ages 30 and above. This balance kept the Total Fertility Rate near-to constant during this period. From 1992, however, the fall in rates below age 30 has exceeded the rise in rates at ages 30 and over by 0.13 of a child and this has been the fall in the Total Fertility Rate. That is, in the 1990s, recuperation of fertility from age 30 onwards has become increasingly less likely to be the case with each passing year. Therefore, the current fall in Australia's Total Fertility Rate is indicative of a longer-term cultural change in the level of completed cohort fertility.

The conclusion that below replacement fertility is not temporary is strongly supported by another recent multi-country study by Frejka and Calot. They

Figure 2: Australia, age-specific fertility rates, under age 30 and over age 30, 1980-1998



conclude that, in most western countries, only a fraction of postponed children are actually born and that generations born from around 1960 are likely to complete their fertility with values decidedly below the replacement level. For Australia specifically, they conclude:

> In sum, cohort fertility is on a descending trend with the 1961-62 birth cohort being the first one that will attain below replacement fertility. In all probability, this trend is going to continue at least for another 10 birth cohorts, judging from the fertility behaviour of younger cohorts.[6]

To conclude, the evidence is now indisputable that below replacement fertility is not merely a temporary cross-sectional phenomenon, but a cultural change in behaviour across lifetimes. Recuperation after age 30 has already taken place in the 1980s and that is why the Australian Total Fertility Rate was near-to-constant in the 1980s. The downward trend in the 1990s is driven by the continued fall in cohort completed fertility. The next question to ask is why we have had this change in behaviour. This is the central question addressed by Coleman in his paper in this issue of *People and Place*. Efficient and effective means of control of fertility are clearly a prerequisite for very low fertility as we are well aware that low fertility is not due to increased celibacy. But the means of control are merely tools; the more important question is what motivates their extensive use. I have categorised Coleman's explanations into four theoretical perspectives: rational choice theory, risk aversion theory, post-materialist values theory and gender equity theory. These theories, though separately presented, should not be considered as mutually exclusive alternatives. All have relevance and there are distinct dimensions of overlap between them.

RATIONAL CHOICE THEORY

Rational choice theory states that, in deciding to have a child, people make the

considered calculation that the benefits of an additional child outweigh the costs. Coleman points out that, while much of the cost may be figured in dollar terms, there are no dollar benefits. Instead, the benefits consist of dimensions of a psychological nature that are not readily quantifiable. He refers to these benefits as 'immanent values'.[7] One way to think about the benefits of a child in this circumstance is in terms of net benefit thresholds (the psychological benefits less the psychological costs). That is, people have some calculus of the psychological gain to them of having the next child. This will be highly variable across individuals. If the economic costs of children rise, some individual psychological thresholds will be crossed and decisions will be made not to have the next child.

The dimensions of the psychological benefits of having a child will vary according to the birth order of the child. Having the first child provides benefits including the status of being a parent, 'being a family', having offspring who will carry on the family name, meeting the expectations of others, having a baby who will be fun and will grow up and love you, fulfilling childhood dreams, providing vicarious pleasure from the child's success. The decision to have a second child may be more related to the strength of the notion that each child should have at least one sibling, or to having a chance at getting a child of the other sex (the set). Those who have a third child may value at least three children as a 'real' family, or they may be still trying for a child of the sex that they don't have. Those who have a fourth child may simply love children. It is likely that the level of the net psychological benefits threshold falls as birth order rises. That is, the highest psychological threshold relates to the first child. Also, it is very likely that the level of the threshold falls as people get older. That is, all other things being equal, a woman at age 29 may feel more inclined to have a second child than a woman at age 39. Psychological costs probably rise with age or, perhaps, increased age leads to downward rationalisation of the perceived benefits. Accordingly, as ages at childbearing increase, people will be less likely to have additional children.

Demographic research to this point has given too little attention to changes in and determinants of the numbers of children that women are having; that is, to the proportions who have no children, one child, two children, and so on.[8] The paper by Merlo and Rowland in this issue of *People and Place* examines trends in childlessness in Australia. Their conclusion is that childlessness is increasing in Australia with each successive birth cohort. However, they also point out that, in the more distant past, childlessness was at even higher levels than we shall experience in the near future. It seems also that differences between the overall fertility levels across contemporary industrialised countries are due less to differences in the proportions childless than in the proportions that have three or more children.[9] Merlo and Rowland estimate that childlessness in Australia will reach 20 per cent for cohorts in the early childbearing ages at present (a more reasonable estimate than the 28 per cent estimate of the Australian Bureau of Statistics that they critique). It is worth contemplating that among a group of women, if 25 per cent have no children and 15 per cent have one child, the group will only achieve replacement level fertility on average if the remaining 60 per cent of women have an average of 3.2 children each. This scenario is not unlike

the experience of generations of Australian women born early in the 20th century, but the very high parities implied for some women by this scenario and achieved in the past are extremely unlikely to recur in the foreseeable future.

Rational choice theory implies that, if we wish to have a positive impact on fertility decision-making, we should try to raise the psychological benefits thresholds or try to reduce the economic costs of children. The first is not readily amenable to policy, although a general sense that a society is child-oriented or child-friendly probably has some effect in raising thresholds. If children are always portrayed as a negative (a threat to a good relationship, an obstacle to having a good time, as potential drug addicts or delinquents) or if social institutions do not make allowances for the possibility that a person has children (no dogs or children allowed), then thresholds will tend to be lower. Encouragement of earlier childbearing could also be a way in which psychological thresholds might be raised. There is no question that the remarkably different history of fertility in the United States in the 1990s and its maintenance at a higher level than in any other industrialised country is related to the much earlier onset of childbearing in the USA.[10] Recently, Singapore considered the introduction of a large tax rebate that would be paid to women if they had their first child before the age of 28 years.

Coleman gives his main attention to the other side of the equation, lowering the costs of children. He contrasts the welfare state approach to achieving this end (Sweden) with the market approach (USA). In fact, Folbre[11] has shown that, in regard to the state taking on the costs of children, the United States is more of a welfare state than is often thought. The welfare state approach is to provide financial transfers to those who have children through the tax-transfer system or to provide free or subsidised children's services to parents. Coleman reports work by Hoem and Hoem[12] that asserts that fertility in Sweden did respond to positive welfare state initiatives in the late 1980s and has responded in the opposite direction with the rolling back of the welfare state in the 1990s. Coleman makes the point that the Swedish case indicates that dependency upon welfare state initiatives may not be sustainable and, in these circumstances, development of market-based approaches may be a better option. He points to the provision of child care in the United States by the market as an example of this possibility. He does not report, however, that child care tax credits and employer-sponsored dependent care pre-tax accounts (roughly equivalent to salary sacrificing in Australian terminology) can provide American parents with child care reimbursements ranging from $480 to $2,000 per year.[13] Also, there is an issue in the United States about the quality of care provided in child care. A great deal of child care in the United States is provided by undocumented immigrants who work in a black economy that is characterised by very low wages. Furthermore, change from a welfare state approach to a market approach is constrained by considerable institutional and cultural inertia. For example, Swedish parents have become accustomed to a particular child care system that they see as affordable and of high quality. A switch to a new market-oriented system staffed by undocumented immigrants would be unlikely to have popular appeal. In the intermediate term, rolling back the welfare state involves additional costs to parents who wish to maintain their use of good quality child care.

Costs of children can be divided into two categories, direct and indirect costs. The direct cost of a child is the actual dollar expenditure on the child less any financial benefits that are received through the tax-transfer system because of the presence of the child. Free or subsidised services reduce the expenditure that parents would otherwise have incurred. I would argue that parents and potential parents are well attuned to changes in the direct costs of children within their own society. If they perceive that children have become more expensive, then psychological benefit thresholds will be put to the test. In the Year 2000 in Australia, young people are facing increases in home mortgage interest rates, increases in the cost of petrol, increases in the costs of child care, probable increases in the costs of imported goods as a result of the lower dollar and increases in the costs of various commodities related to the introduction of the Goods and Services Tax. The Australian Competition and Consumer Commission has recently estimated that, with the introduction of the GST, the costs of clothing, books and magazines, train fares, electricity and gas and take-away food, all of which affect young families, will rise by more than the levels predicted earlier by the Government. The net benefits allegedly flowing from the new tax package to dual income families with children with incomes from $35,000 to $70,000, that is the majority of young families, are very small compared to the benefits that flow to high income couples without children.[14] Psychological thresholds may be even more sorely tested in Australia in the near future.

The indirect cost of a child is the earnings lost because of the need to spend time caring for the child. Research in several countries has shown that the indirect cost of the first child is considerably greater than the indirect cost of later children.[15] Direct costs are also higher for the first child but direct costs are flatter than indirect costs as the number of children rises. Indirect costs fall as society is organised in such a way that parents can combine work and family. This may partly explain the fact that countries with high labour-force participation rates for mothers have relatively high fertility and countries with low participation of mothers have very low fertility.[16] Unpublished research that I have conducted for the Commonwealth Child Care Advisory Council shows that participation of mothers in the labour force in Australia is dependent upon the age of the youngest child and not upon the number of children. Thus, there is a strong argument that indirect costs are more significant in determining whether a woman has a first child than direct costs, while direct costs are more significant in decision-making about later children. Chapman et al.[17] have shown that indirect costs have fallen in Australia from the 1980s to the 1990s as more mothers have been able to participate in the labour force and, hence, to lower their earnings forgone through having a child. This trend has probably kept first birth rates at a higher level than would otherwise have been the case.

The above discussion has a couple orientation. A rational choice calculus might also be considered in relation to having a birth outside of marriage or to decisions about marrying.

RISK AVERSION THEORY

Risk aversion theory adds another dimension to rational choice theory. The assumption of rational choice theory is that people have a good knowledge or understanding of the costs and benefits of having the next child. Risk aversion

theory takes off from the point that the costs and benefits are all future costs and benefits and, accordingly, we cannot know what those costs will be. In having a child, people are making a decision to change their future life course and hence their decision depends upon their future orientation.[18] If there is a perception that economic, social, intimate or personal futures are uncertain, decision makers may err on the side of safety in order to avert risk. Coleman[19] points to the rise of economic uncertainty. Jobs are no longer lifetime jobs. There is a strong economic cycle of booms and busts. Geographic mobility may be required for employment purposes. Interest rates can be expected to shift by large amounts in short periods. Housing prices fluctuate, but we are never exactly sure what part of the cycle we are on. Risk aversion theory implies investment in economic security (education, attachment to the labour force, long hours of work, savings) rather than in the insecurity that accompanies having children (low income for a period, uncertainty of return to the labour force, higher consumption expenditure, economic responsibility for dependents).

Risk aversion might also be applied to social, intimate or personal spheres. There is a risk that children will disrupt the relationship of the parents. There is a risk that children will follow pathways that cause parents considerable anxiety. There is a risk that some harm will come to the child. There is a risk that the relationship will break up and we will be left alone to support the child. There is a risk that we shall have enough trouble coping with a difficult world on our own, let alone with children. There is a risk that the social trend towards child-unfriendly societies will continue. There is a risk that public supports for families with children will be rolled back. We can avoid all of these risks by limiting the number of children we have.

Risk aversion may also affect whether people marry. While rates of childbearing outside of marriage are rising, rates of childbearing within marriage are certainly still much higher. A fall in the proportion of people marrying will therefore tend to lower the birth rate. It is certainly the case that young women in Japan see marriage itself as a risk to their future employment. In Italy, it is suggested, perceived economic risks are a determinant of the low marriage rates.

Risk aversion is not readily amenable to policy initiatives. Insurance is a conventional approach to other forms of risk, but its use is certainly not common in regard to the risks associated with raising children. Generally, families with children spend almost all of their money or they spend more than the money they have (dis-savings). Thus, the prospect of substantial expenditure on insurance against the broad range of risks of having children is difficult to contemplate. A well-developed welfare state is a more common way of smoothing out risks of this sort. Job loss is covered by social security arrangements, services for children are costless or subsidised, unforeseen health costs are covered, and so on. The present direction of social policy, however, is to pass all the risks and all the costs back on to individuals and families and away from the state. Greater employment security would also reduce the risks involved in having children, but, again, the direction of industrial policy is to release the employer from obligations to the employee. In my view, risk aversion is an important reason why people have no children or fewer children, but the direction of social policy in almost all industrialised countries is to increase the risks that people face, rather than to

reduce them. Some form of new social contract is required that will enable the benefits of economic reform to continue but reduce the risks that people face because of that reform.

POST-MATERIALIST VALUES THEORY

Post-materialist values theory is associated with the so-called Second Demographic Transition theory.[20] This theory stipulates that changes in social and demographic behaviour have been driven by the growth of the values of individual self-realisation, satisfaction of personal preferences, liberalism and freedom from traditional forces of authority, particularly religion. This, following Inglehart,[21] is all made possible by emancipation from material concerns in modern prosperous societies.[22] These values are said to have been associated with increases in divorce rates, cohabitation and ex-nuptial births. There is little doubt that these forms of behaviour are much more prominent in the more liberal societies of Nordic countries and English-speaking countries than in the more traditional family cultures of countries of Southern Europe, Germanic countries and Asian developed countries. However, as Coleman indicates, it is evident that, among the advanced countries, fertility is higher in the liberal societies than in the traditional societies. Thus, societies that maintain traditional behaviour seem to be considerably less well able to reproduce themselves than the more liberal societies. I consider that the gender equity theory described below provides an explanation of why it is that societies that hold fast to traditional family systems are societies that have very low fertility. Indeed, it is my strong view, based on gender equity theory, that attempts to restore 'traditional family values' – the male breadwinner of the family – will lead to lower and lower fertility. Descriptions of women as selfish or not prepared to do their national duty was an approach to falling fertility prominent in the past. It was incorrect then but is now counter-productive because it is divisive and because it reduces the policy debate to a trivial level easily lampooned in the popular press. Yet, this viewpoint is still evident in some countries. In Japan, young people who delay marriage and childbearing are frequently described in the media as 'parasite singles' and, in Austria, a minister of government has called upon women to fulfill their national duty of reproduction. Japan's and Austria's fertility continue to languish at very low levels.

Another finding that is counter to the theory that low fertility has been due to the growth of post-materialist values is the survey evidence from various countries in Europe and in Australia that women in their early twenties express preferences for numbers of children that are, on average, above replacement level.[23] As they age through their twenties preferences fall but remain well above actual behaviour. This suggests a willingness on the part of women to have more children that they eventually actually have. That is, it is costs, uncertainty and the nature of social institutions that combine to limit the number of children that women have.

The theory that post-materialist values encourage low fertility is a classic example of the 'ecological fallacy'. Within any one society, on average, individual women who are more highly educated, less religious, more urban, or more liberal in their attitudes and values have lower fertility than the less educated, more religious, more rural and more

conservative.[24] This finding is then used to draw the fallacious conclusion across societies that more liberal societies will have lower fertility than more conservative societies. The lesson from this ecological fallacy is that a country's low fertility should not be addressed by laying the blame selectively upon a subgroup of women within a given society, those with low fertility. Rather low fertility is a societal phenomenon related to the structure of social institutions. Indications of the role of social institutions in the construction of low fertility are evident in the above discussions of rational choice theory and risk aversion theory. Gender equity theory provides the rationale for an emphasis upon the structure of social institutions in addressing low fertility.

GENDER EQUITY THEORY

Gender equity theory of low fertility is fully described in McDonald (JPR, 2000).[25] A more general treatment of the role of gender equity in fertility theory (low and high) is given in McDonald (March 2000).[26] Social institutions in advanced countries, until recently, have been founded upon an assumption of the male bread winner model of the family under which the father goes out to work while the mother stays at home to look after the children. The principle underlying this model is that there is a natural differentiation between men and women that requires the man to be the provider and protector and the woman to be the carer and reproducer. Since the 1960s in particular, women have asserted their rights as individuals in areas such as education and market employment to the extent that these social institutions are now characterised by a high degree of gender equity.

The thrust of gender equity theory is that very low levels of fertility in advanced countries today can be explained in terms of incoherence between the levels of gender equity applying in different social institutions. In countries with very low levels of fertility, it is postulated that the levels of gender equity in institutions that deal with people as individuals, such as education and market employment, are high while, on the other hand, the levels of gender equity applying in institutions that deal with people as members of families, such as industrial relations (the terms and conditions of employment), family services, the tax system, social security and the family itself are low. Put more simply and in terms similar to those expressed by Chesnais[27] and Esping-Andersen,[28] if women are provided with opportunities near to equivalent to those of men in education and market employment, but these opportunities are severely curtailed by having children, then, on average, women will restrict the number of children that they have to an extent which leaves fertility at a precariously low long-term level. While gender equity in individual-oriented institutions has progressed in all advanced countries, the male breadwinner model still underpins family-oriented social institutions. The more traditional the society in regard to its family system, the greater is the level of incoherence between social institutions and the lower is fertility. This can explain why the lowest fertility rates in the world are found in the countries of southern Europe and in other societies with traditional, male-dominated family systems.

From the policy perspective, consideration needs to be given to reform of institutional arrangements that entrench the male breadwinner model of the family. Here, I point to three policy areas in

Australia that have limited the opportunities of women to combine work and family. In general, the industrial reforms of the present government, while desirable from some perspectives, have not provided incentives for companies to implement family-friendly work policies. The outcomes have been mixed but arrangements such as family-related leave and flexible working hours (flexible to the employee) tend to have suffered, leading to very uneven access across firms to family-friendly employer-provided benefits.[29] In general, there has been a growing expectation that the firm comes first and employees are expected to put in long hours when required.

The second area of policy that has suffered is the provision of publicly-funded family and children's services. Changes in the funding of child care are a case in point. From 1997, the direction of child care policy changed. The 1996 Report of the National Commission of Audit had recommended the following cut backs in child care provision:

- Withdrawal of operational grants to community child care centres
- Income-testing of the Childcare Cash Rebate
- Abolition of the Quality Improvement and Accreditation System
- Restriction of child care assistance for non-work related care

The National Commission of Audit was concerned that child care expenditure was 'uncapped' and hence it would continue to rise unabated. However, given the fall in the birth rate during the 1990s, the slowing down of the rate of increase of labour-force participation of mothers and the increasing gap between the fees charged by centres and the maximum level of child care assistance, it is likely that the demand for child care was levelling off just at the time that cut-backs in provision were made. The simultaneous combination of an apparent misjudgment of future demand with financial policies designed to curtail demand not only capped but sharply reversed the upward trend in government expenditure on child care. For example, Government expenditure on child care assistance fell from $710m in 1996-97 to $640m in 1997-98. This is a fall of more than 10 per cent in one year.[30]

With the introduction of the Goods and Services Tax, a new Child care Benefit will commence on 1 July 2000. This will be a combination of the former child care assistance and the child care rebate. The Government has estimated that its expenditure on child care is expected to reach $1.5 billion annually by 2002-03,[31] but, on present trends, this figure is most unlikely to be reached.

The third policy area that has provided disincentives to gender equity is the expansion of tax rebates for families with children that have only one income earner. For example, in a case where the wife is considering a part-time return to work, the loss of tax rebate operates as a substantial disincentive, particularly when combined with increases in the cost of child care. A couple will be far better off financially if a husband working 40 hours a week works another ten hours than if the wife goes out to work for ten hours. These disincentive effects are set to be multiplied with the commencement of the new tax system in July 2000 as this system, at family income levels of $35,000 to $70,000, provides substantial benefits only to single-income families. Survey evidence indicates that many men are unhappy about the long hours that they are required to work and that most couples want to be dual income earners. Women realise that maintaining some attachment to the labour force is impor-

tant to the family's future living standards. Thus, setting up tax disincentives for couples to have dual work arrangements is clearly counter to gender equity.

Policy in Australia has provided maximum family benefits through the tax transfer system to couples who take the extreme courses of the mother ceasing her working career after the birth of the first child (through the receipt of maximum single-income family tax rebates) or working full-time from soon after the birth of the first child (through the receipt of maximum levels of child care assistance). The rationale has been that this policy approach provides 'choice' to parents, but these extreme choices are not in keeping with the evident preferences of most Australian parents. If maximum benefits are provided to those who take the extreme approaches to work and family, disincentives apply to those who wish to follow middle courses. The example in the previous paragraph of the mother wishing to work ten hours a week is a clear case in point.

The outcome of these arrangements is that younger women observe those a little older who, having had a child or an extra child, find it difficult to combine work and family. Younger women who wish to fulfill the employment opportunities now open to them accordingly make the decision to avoid having a child or an additional child. Those a little older, wishing to extricate themselves from a situation that makes it difficult for them to work, do not have the additional child that they might otherwise have had.

CONCLUDING REMARK

Data for the first nine months of 1999 suggest that the fall in the Total Fertility Rate in Australia is continuing. The expected TFR for 1999 is about 1.73 births per woman. I have argued in this paper that this downward trend is not about to turn around of its own accord. The higher fertility is at the time it stops falling, the more secure our demographic future. We should be aiming to stop the fall in fertility at around 1.6 births per woman or higher. At this level, with continuation of Australia's immigration programme, Australia's age structure and its population future will be sustainable. A fall in fertility to 1.3 births per woman would create major problems for demographic sustainability. The difference between 1.6 and 1.3 is equivalent to one child for 30 per cent of all women. This is not a very large shift in behaviour and so the potential for a fall to 1.3 births per woman should not be ignored. The fact that we are talking about one child for 30 per cent of women also means that the emphasis of policy should be to affect decision-making at the margin. Thus, it is not sensible to direct an 'attack' upon women who are strongly confirmed in their desire to have no children. Rather the emphasis should be upon assisting those who would prefer to have a child or an extra child but decide under present policy conditions not to do so. In terms of rational choice theory, we should be trying to prevent a further 30 per cent of net benefit thresholds being exceeded by costs.

If we accept the arguments of rational choice theory, risk aversion theory and gender equity theory, the policy measures required are expensive and long-term in nature. Given the pace of fertility decline in Australia in the 1990s, we should be seriously addressing the full range of potential policy measures to see which may be more effective. In larger terms, we need a new social contract that enables micro-economic reform to proceed but, at the same time, enables people to undertake longer-term life projects

like having children. There is little evidence of such a policy direction in Australia at present. The recent decision of the Government and the Australian Bureau of Statistics to exclude the fertility question from the 2001 Census is indicative of the fact that Australian policy makers afford this issue little priority.

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