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Conclusion

The quantitative and qualitative evidence presented in this book shows that the historical fertility decline took place in Tasmania about the same time as in the other Australian colonies, in Western Europe and in other English-speaking countries (Jones 1971; Woods 1987; Caldwell 1999; Cleland 2001; Gauvreau and Gossage 2001; Hacker 2003; Bengtsson and Dribe 2014). Fertility started to decline in the late 1880s and the fertility decline became well established during the 1890s. The fertility decline was so entrenched by the early 1900s that people who were opposed to it, such as clergymen and the NSW commissioners into the decline in the birth rate in 1903, recognised they were unable to halt or reverse it.

Quantitative evidence of how fertility declined supports both ‘innovation’ and ‘adjustment’ theories, with ‘stopping’ being an ‘innovative’ form of behaviour and ‘spacing’ an ‘adjustment’ or ‘adaptation’ to new social and economic circumstances. The fall in fertility in late 19th-century Tasmania was due primarily to the practice of stopping behaviour in the 1880 and 1890 cohorts, as argued by many demographers (Henry 1961; Knodel and van de Walle 1979; Coale 1986). However, as in 19th-century Utah (Anderton and Bean 1985; Bean et al. 1990), in Tasmania, birth spacing was also used as a strategy to limit fertility by the 1890 cohort. In all marriage cohorts, some groups had longer birth intervals than others, suggesting that, as in parts of Western Europe (Van Bavel 2004a; Dribe and Scalone 2010; Tsuya et al. 2010; Van Bavel and Kok 2010; Kolk 2011), these groups were deliberately spacing their births before the fertility decline. Changes in starting behaviour contributed to the fertility

decline due to an increase in the age at marriage. The change in the age at marriage is probably related to a change in social values, rather than a change in fertility preferences.

Quantitative and qualitative evidence shown here supports all the individual theories of why fertility fell, apart from many of the theories related to infant and child mortality. Similar to findings from a recent study of the fertility transition in five North American and European countries (Dribe et al. 2014), here both 'innovation' and 'adjustment' factors played a role in the fertility decline. Rather than 'blending' the two sets of theories (Cleland 2001), however, the fertility decline should be viewed in a much broader context. The fertility transition occurred during the broad social and economic revolution that occurred in Tasmania in the final two decades of the 19th century, with an important part of this revolution being changes in the role and status of women. The adoption of ideas and values about fertility limitation and of methods of fertility control can be seen as one of the many social changes that occurred at this time.

Few studies of the historical fertility decline have had access to contemporary literature of the period. Thus, there is little evidence of how ideas and values about fertility control were diffused (Casterline 2001), what types of contraceptives were used or the role played by women in the fertility decline (McDonald 2000). The historical sources used in this study provide valuable information in all these areas.

In Tasmania, the final three decades of the 19th century were a time of economic and social transformation—conditions under which fertility would fall, according to demographic transition theory (Notestein 1945). The colony became more industrialised and urbanised. Agriculture became progressively less important in terms of both employment and its contribution to the colony's economy. Methods of transportation improved with the spread of the railways and, in the final decade of the 19th century, the bicycle became a form of transport for both men and women. Inventions such as the electric telegraph, electric lighting, electric trams and even the telephone were well established in Tasmania by the end of the 19th century and farming became more mechanised. From the late 1860s, schooling became compulsory for both boys and girls, new schools were established across the colony during the final three decades of the 19th century and rates of literacy improved dramatically. In the 1880s and 1890s, a number of significant public health measures were put in

place throughout the colony. Studies of the fertility transition in Western European and other English-speaking countries have shown that many of these indicators of social and economic development are associated with the fertility decline (for example, Lee et al. 1994; Schellekens and van Poppel 2012; Dribe et al. 2014).

Although there was a marked improvement in literacy in the late 19th century, similar to Alter's (1988) study of the historical fertility decline in Verviers, Belgium, I did not find any relationship in the quantitative analysis between husbands' and wives' levels of literacy and their fertility. This is possibly because the measure of literacy—that is, whether the husband and/or wife signed the marriage certificate—is a weak measure of literacy levels.

Social and economic development brought new ideas to Tasmania. Improvements in education opened people's minds to these new ideas and allowed them to access information (Cleland 2001). Tasmania was not an isolated place in the second half of the 19th century. There was considerable movement of people between Tasmania and other colonies and countries. Communication within Tasmania, with other colonies and with other countries improved markedly from the 1870s. Written material about fertility limitation became available in the Australian colonies from the late 1870s. Books and pamphlets were available in city bookshops and were advertised for sale by mail in the newspapers, lectures were given on 'family limitation' and pamphlets were circulated in some cities. Newspapers also published articles about the trials of people charged with selling 'obscene' literature pertaining to fertility control. Many of the witnesses to the NSW royal commission spoke about the books' authors and the trial judges with great familiarity.

Unlike in Britain and Western Europe (Seccombe 1993), the 1903 NSW Royal Commission on the Decline of the Birth-Rate indicates that some doctors were a source of information on fertility control for their patients. However, informal sources were much more important in spreading ideas and values about fertility limitation and information about methods of fertility control. Information about prevention was spread by word of mouth among women, including from midwives to their patients. In the Australian colonies, informal sources appear to have been an important source of information for women of all classes. In contrast, for England, evidence of the importance of informal sources relates mainly to the working classes (Llewelyn Davies 1978; Seccombe 1993).

By the beginning of the 20th century, family limitation had become a legitimate topic for public discussion in Australia. People spoke freely about the subject in ordinary conversation and newspapers contained many editorials, articles and letters on the subject.

As argued by Caldwell (1999), the availability and use of artificial methods of contraception increased markedly from the 1880s, as did the use of methods such as 'withdrawal' and abortion, which had been practised before the fertility decline. Several artificial methods of contraception were used in the late 19th and early 20th centuries: French letters, the India rubber *Pessaire Preventif*, soluble pessaries, sponges, syringes, douches and enemas. Artificial contraceptives and pills to procure abortions were sold by pharmacies, hawkers and by mail through advertisements in the newspapers. Some abortionists also advertised discreetly through the newspapers. Most artificial methods of contraception were relatively expensive in relation to middle-class and working men's wages, so many women made their own contraceptives. 'Withdrawal' appears to have been used as a method of prevention mainly by the middle class. Abortion was used to limit family size by married and unmarried women of all classes, but particularly by working-class women. There is no evidence that abstinence was the main method of reducing marital fertility, as argued by Szreter (1996) for England and Wales.

The quantitative analysis shows that, in Tasmania, as in other Australian colonies, parts of Western Europe, Canada and the United States, the upper and middle classes were the first to limit their fertility followed by the other classes, with unskilled workers and farmers the last to adopt fertility control (Jones 1971; Livi-Bacci 1986; Anderson 1999; Schellekens and van Poppel 2012; Bengtsson and Dribe 2014; Breschi et al. 2014; Dribe et al. 2014; Vézina et al. 2014). In the 1890 cohort, white-collar workers also spaced their births, compared with farmers and unskilled workers, possibly for economic reasons. These findings are similar to Larson's (1994) for Melbourne (Victoria) in the late 19th century.

The quantitative data show that couples in urban areas of Tasmania had significantly lower fertility than couples in rural areas, even before the fertility transition. This was similar to the other Australian colonies, parts of Western Europe and Canada (Jones 1971; Larson 1994; Livi-Bacci 1986; Sharlin 1986; Anderson 1999; Gauvreau and Gossage 2001; Vézina et al. 2014). In Tasmania, couples in urban areas were more likely to stop having children and to space their births than couples in rural areas even

in the 1860/70 marriage cohorts. The qualitative data indicate that people in urban areas had better access to artificial methods of contraception than those in rural areas at the time of the fertility decline.

Mining grew in importance as an occupation in late 19th-century Tasmania. However, the quantitative analysis shows that, unlike in 19th-century England and Wales (Szreter 1996), Tasmanian miners did not have very high fertility. Miners in Tasmania were very different from those in England. English miners tended to be born in a mining location and worked there as miners all their lives. Tasmanian miners, on the other hand, were highly mobile both occupationally and geographically. In Tasmania, men often worked in other occupations in non-mining areas before they moved to mining localities and took up mining. In later life, they often took up other occupations in the mining area or moved elsewhere.

Opportunities for social mobility were an important feature of the late 19th and early 20th-century social and economic transformation. Australian society was less rigid than English society and there were many opportunities for social mobility, particularly with the growth of more 'modern' occupations. The qualitative evidence shows that many middle and working-class people had high aspirations for themselves and their children and this probably encouraged the practice of fertility control, as argued by some scholars (Banks 1954; Lesthaeghe and Wilson 1986). These couples often aspired to a higher standard of living for themselves, including the opportunity to purchase their own home. As in Britain and Western Europe, a continual theme of witness statements to the 1903 NSW Royal Commission was that couples wanted to limit their families because they could not afford to have large numbers of children. Parents had high aspirations for their children and were concerned with the 'quality' of their children, rather than 'quantity'. They wanted their children to have a good education and to have other opportunities that people of higher socioeconomic status took for granted, such as learning to play the piano. In these circumstances, the demand for children fell because the cost of having another child was greater than the benefit of having that child (Easterlin 1975; Becker 1981; Becker et al. 1990).

Children were generally viewed as 'dependants' rather than 'workers', except in rural areas, where farmers relied to some extent on their children's labour. While education became compulsory in the late 1860s, children of the urban and rural working classes and of smaller

farmers were regularly absent from school to help in the home or on the family farm or to go out to work to supplement the family income. The quantitative analysis shows these families had the highest fertility, supporting Caldwell's wealth-flow theories (Caldwell 1976; Caldwell and Ruzicka 1978). This is consistent with Canadian findings that families in Ontario whose children attended school all year had significantly lower fertility than other families (Gauvreau and Gossage 2001).

While Tasmania was undergoing remarkable social and economic change in the final two decades of the 19th century, there was an economic depression in the early 1890s that brought an increase in unemployment and a fall in wages. This probably provided an additional incentive for couples to adopt fertility control measures and may explain why couples in the 1890 cohort were significantly more likely to space their births than those in the 1860/70 cohorts.

Tasmania was a relatively secular society from its earliest days. Religion was generally not as important to people in Australia as it was in Britain or the United States. By the 1880s, religious groups had little influence on political and social attitudes and values. In general, people did not view religion as having importance in their daily lives. Even people who had religious beliefs and went to church regularly often made their own decisions about what was right rather than taking the church's views. Although clergymen were opposed to fertility control, they were unwilling to speak about it publicly for fear of being ridiculed or, worse, of losing some of their stipend through their parishioners leaving the church.

The adoption of fertility control in a secular society such as Tasmania is consistent with the argument that, in late 19th and early 20th-century Western Europe, secularisation was a necessary condition for the spread of fertility control, with the EFP finding that secularised communities tended to adopt fertility control early (Lesthaeghe and Wilson 1986). Other studies have found that, in Western Europe and Canada, 'traditional' religious groups, such as Catholics and orthodox Protestants, had significantly higher fertility than the other more liberal religious groups (Gauvreau and Gossage 2001; Van Bavel and Kok 2005; van Poppel and Derosas 2006). Van Poppel et al. (2012) also suggest that some of the Protestant groups had high levels of literacy because of their emphasis on reading the scriptures. Education gave them access to ideas and information about fertility control and encouraged them to take control over this aspect of their lives.

Consistent with previous Australian analyses outlined in Chapter 2, in Tasmania, the relationship between religious affiliation and fertility was not straightforward. There were no significant differences between religious groups in stopping behaviour, with Catholics no less likely to stop having children than Anglicans. There were, however, significant differences in spacing behaviour, with Other Nonconformists (mainly Baptists and Congregationalists) more likely to space their births than Anglicans in every marriage cohort, indicating that they were deliberately spacing their births before the fertility decline. Congregationalists and Baptists may have had high levels of literacy from the earliest years because of their religion's emphasis on reading the scriptures. Methodists also had significantly shorter birth intervals than Anglicans in the 1880 marriage cohort, but this is difficult to explain. In trying to interpret these quantitative results, it is important to note that the measure of religion used in the analysis—that is, the religious rites according to which the couple was married—is a measure of religious affiliation, not of religiosity. Additionally, some Tasmanians may have changed their religious affiliation during their lifetime.

As noted, one of the major social changes in Tasmania in the late 19th and early 20th centuries was a change in the role and status of women. From the 1880s, women achieved important rights, their position in the family and in the wider society started to change and they began to participate in areas of society that had formerly been closed to them. For women, there was no more fundamental right than controlling their fertility.

Qualitative evidence in this study supports Seccombe's (1993: 168) view that 'women were the driving force' behind the fertility decline. The 1903 NSW Royal Commission on the Decline of the Birth-Rate viewed women as primarily responsible for the fall in the birth rate in the late 19th century and this applied to women of all classes. Women played a very active role in determining the size of their families. Many of the artificial contraceptives used were female-controlled—some of them made by women themselves. Specialist women's sections were established in some retail pharmacies, selling women's goods, including preventives. While some husbands and wives agreed about the use of prevention, some methods of family limitation, such as abortion, could be used without a husband's knowledge and/or consent. Women were proactive in purchasing preventives and in seeking out ways to procure an abortion. They also spoke freely in public about their desire to avoid having large families. Women were an important source of information for other women on the ideas and values

about family limitation and knowledge about methods of prevention. Although feminism was originally a movement for elite and middle-class women, feminist ideas gradually spread throughout other strata of society. By the turn of the century, women of all classes were expressing feminist sentiments and standing up for what they perceived as their rights.

The quantitative and qualitative analyses in this study do not provide support for many theories of the relationship between infant and child mortality and fertility decline. Infant mortality in Tasmania was relatively flat between 1860 and 1899 and only started to decline at the turn of the century, well after fertility had begun to decline. Child mortality began to decline from the 1860s, with the decline interrupted by a couple of major epidemics in the 1870s.

Unlike in Western Europe and the United States (Knodel 1978; Alter 1988; Haines 1998; Alter et al. 2010; Schellekens and van Poppel 2012; Breschi et al. 2014; Vézina et al. 2014), the quantitative analysis here does not support the 'replacement' theory of infant mortality. In Tasmania, couples who had a child die in infancy while the mother was not pregnant with another were as likely to stop having children as other couples. Also, unlike in Germany and the United States (Knodel 1978; Haines 1988), the quantitative evidence does not support the 'insurance' theory of infant mortality for Tasmania. Rather than child mortality deterring couples from efforts to limit their fertility, in Tasmania—similar to the Netherlands (Schellekens and van Poppel 2012)—the more infant and child deaths the family experienced, the more likely they were to stop childbearing.

Unlike the Netherlands and Spain (Reher and Sanz-Gimeno 2007; van Poppel et al. 2012), in Tasmania, the number of surviving children had no significant association with the time to the next birth, indicating that couples were not adjusting their birth spacing in relation to the deaths of infants or children. Unlike Utah and Germany (Bohnert et al. 2012; Sandström and Vikström 2015), but similar to Belgium (Alter et al. 2010), in Tasmania, the sex composition of the family also had no significant association with stopping or spacing practices.

However, in Tasmania, there was a 'physiological' relationship between infant mortality and fertility, as also found in England and many parts of Western Europe (Knodel 1978, 1982; Wrigley et al. 1997). Having a child die as an infant when a woman was not pregnant with another

significantly reduced the time to the next birth, because of the effect on amenorrhoea of stopping breastfeeding. The survival analysis of parity progression shows that women who had a child die as an infant had a significantly higher risk of having another birth than other women at most parities, but this probably reflects the length of time to the next birth rather than having another birth.

In conclusion, the evidence from historical sources of the period allows the quantitative evidence to be placed in context and the various theories of why fertility declined to be viewed in a coherent framework. Fertility declined in Tasmania in a period of remarkable social and economic transformation. Tasmania became more industrialised and urbanised, there was growth in 'modern' occupations and an increase in opportunities for social and economic mobility. With the introduction of compulsory education, both boys and girls had access to an education and literacy improved markedly. One of the major social changes was in the role and status of women, who became the driving force behind the fertility decline. With the spread of feminism, women of all classes wanted more from their lives than being restricted to the home through constant childbearing. In many ways, the fertility decline can be viewed as a period in which middle and working-class men and women aspired to lead lives like those of upper-class people. They realised they could improve their social and material conditions and give their children a better future through controlling their fertility, as the upper classes had begun to do many years before.

These findings can be applied to other Australian colonies that were also experiencing broad social and economic changes together with a fertility decline in the same period.

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