Genevieve Heard
Dharmalingam Arunachalam *Editors*

Family Formation in 21st Century Australia

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Genevieve Heard
Dharmalingam Arunachalam
School of Social Sciences, Monash University
Melbourne, Australia

Preface

In the first decade of the twenty-first century, Australia experienced increased prosperity, albeit punctuated by the global financial crisis. This decade also saw the introduction or enhancement of progressive social policies, including paid parental leave and family benefits. However, housing and education became more expensive, income inequality increased and job security deteriorated.

Against this background, there has been rapid and fascinating change in patterns of family formation. As a consequence, demographic research, sociological theory and population projections have dated quickly. In this decade, new partnering and fertility patterns have emerged, some of which are common to other developed nations. (Indeed, Australian trends have the potential to illuminate many of the most pressing issues in international research on family formation.) This book provides a timely empirical overview of family formation trends, using up-to-date sources.

Each contribution contained in this volume investigates a different and topical aspect of family formation in Australia. Some chapters interrogate data from the most recent (2011) Australian Census of Population and Housing. Others take advantage of the fact that more than ten waves of data are now available from the large-scale longitudinal survey, Household, Income and Labour Dynamics in Australia (HILDA), enabling analysis of change over the full decade. The methodology employed across chapters is diverse and is mostly quantitative, with qualitative insights providing depth on key issues. Findings are described with reference to contemporary theories of family change.

Melbourne, Australia

Genevieve Heard
Dharmalingam Arunachalam

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Introduction

Genevieve Heard

Treating contemporary patterns as an end-point in theories of family change is an occupational hazard for social scientists, and late twentieth century theories were no exception. Low and declining rates of marriage and childbearing and increasing rates of relationship dissolution have been considered central to the 'second demographic transition'. The nuclear family is sometimes viewed as a twentieth century relic, as the focus has turned to the proliferation of alternative relationship and family forms and styles such as cohabitation, 'living apart together', and family formation by same-sex couples. Each of these subjects is investigated at length in this volume. And yet, while these newer family forms flourish, more traditional practices of family formation are proving resilient. In the first decade of the twenty-first century, Australian marriage and divorce rates stabilised, while the total fertility rate increased after long-term decline. These interruptions to long-term trends in partnering and fertility are equally fascinating and each of these demographic phenomena is also investigated in the book.

1.1 Partnering

1.1.1 Marriage and Cohabitation

For decades, we have heard that marriage is on the wane, in Australia and across the secular West. The true picture is somewhat more complex (Heard 2012). Certainly, the married proportion of the total population has been falling. It is no longer the case that a majority of the population is married. In 2011, the proportion of the Australian population (aged 15 years and over) in registered marriages fell below half. Taking a longer view, the married proportion was as high as 64 % during the

G. Heard (✉)
School of Social Sciences, Monash University, Melbourne, Australia
e-mail: genevieve.heard@monash.edu

mid-twentieth century marriage boom. Although this peak was historically unusual, we must go back to 1901 to find another census year in which the married population was less than half the total population.

Does the falling proportion of Australians who are married really measure the popularity of marriage? After all, the census is merely a snapshot of the Australian population at one point in time, and of those who were married at this point in time. Proportions *ever* married (counting those who indicated they were separated, divorced or widowed, as well as those who were married) appear to testify to the continuing popularity of marriage. At the 2011 census, these proportions exceeded 70 % at 35–39 years of age, exceeded 90 % at 55–59 years, and peaked at 96 % among those aged 75 years or more. To a large extent, the figures for older Australians reflect the marriage trends of decades past, rather than recent trends. Nevertheless, it is difficult to argue that marriage is on the wane when the institution remains the dominant partnership model for adult Australians.

It may be more accurate to claim that Australians are spending less time within the institution of marriage. This is because Australians are marrying later, and are not necessarily remaining married for life. The median age at first marriage has climbed steadily, reaching 28.0 for females and 29.7 for males in 2011 (ABS 2008, 2012). Meanwhile, the crude divorce rate has fluctuated between 2.2 and 3.0 divorces per 1,000 people since the introduction of no-fault divorce in 1976 (ABS 2008).

In this context, there is a growing awareness that the late twentieth century view of 'marriage on the wane' is too simplistic for the twenty-first century. The story is more complex than can be conveyed with overall numbers of marriage registrations, or proportions married. Rather, theory suggests we are witnessing an evolution in the meaning of marriage (Cherlin 2004, 2005, 2009; Coontz 2004). The institution remains popular, but appears ever harder to access and maintain. Social scientists have turned their attention to the question of *who* gets married – and stays married.

Chapter 3 further investigates this question. Using the more detailed longitudinal HILDA data, Baxter et al. provide support for previous findings based on cross-sectional data (Heard 2011): Australian men and women with higher incomes are now more likely to get married, as are those with higher levels of education (although the latter result is significant for men only). Further investigation based on interview data demonstrates that Australians continue to aspire to marriage, and consider that it represents a greater commitment than cohabitation. The chapter provides support for the view that marriage is increasingly idealised as the strongest and most desirable partnering achievement. That marriage is increasingly associated with higher socio-economic status only seems to enhance its desirability. Although the institution may be perceived as ever more exclusive, pathways into marriage are diversifying. The authors predict that, far from disappearing, marriage will continue to be strengthened by these trends.

Of course, many Australians are partnered without registering a marriage. Almost 10 % of those aged 15 years and over in 2011, compared to 7 % in 2001, live in unmarried cohabiting relationships. This category includes same-sex as well as opposite-sex partnerships. Then there are those in "living-apart-together" (LAT) relationships – those who identify themselves as being in a relationship with

someone who does not reside in the same household. These relationships are effectively hidden in the census data, but the proportion living in such relationships has been estimated at 9 % of the adult population, or 24 % of those who were not cohabiting or married (Reimondos et al. 2011).

The prevalence of these 'alternative' relationship types varies greatly by age group. Chapter 2 adopts as its focus the way in which these relationship choices shape early adulthood. Evans finds strong age-related norms around the formation of live-in relationships. Attitudinal data shows that young people consider it important to be living with a partner by 30–35 years of age. At younger ages, live-in relationships are often delayed while educational qualifications are pursued. This delay, rather than leading to a greater proportion of single people, prompts many Australians in their early twenties to form LAT relationships. These relationships are generally considered serious by survey respondents, who commonly intend to cohabit with their LAT partners in the future.

The growth of cohabitation in the late twentieth century prompted a key question: whether cohabitation should be viewed as an alternative to marriage, a trial marriage or a stepping-stone to marriage. Cohabitation has now been socially acceptable for several decades. Yet, taken together, the findings of Chaps. 2 and 3 suggest that the majority of Australians still do not view cohabitation as an equal alternative to marriage. Rather, as its peak among young adults suggests, cohabitation continues to function as a pre-marital state, while marriage remains the ultimate partnering ambition for many. Some will cohabit with multiple partners before marrying, suggesting that there is also some validity in the concept of cohabitation as 'trial marriage'. So prevalent is cohabitation before marriage (with more than three quarters of marrying partners having cohabited beforehand) that pre-marital cohabitation has itself become institutionalised.

1.1.2 Interethnic Partnering

Chapter 4 considers the more specific subject of interethnic partnering. Walker and Heard are less interested in the *kind* of partnership (married and cohabiting relationships are considered together) than in the *fact* of partnership where it involves individuals of differing ethnic backgrounds. Interethnic partnering is of interest not so much because it illuminates partnering trends per se, but because it may be considered a measure of the strength or weakness of boundaries between ethnic groups.

Nevertheless, this chapter adds another dimension to the question of what contemporary partnering patterns 'mean'. At minimum, partnering across ethnic group boundaries requires close social interaction between members of different groups, and suggests that cultural differences do not represent a significant obstacle to partnership (Kalmijn and Flap 2001; Alba and Nee 2003). In this sense, interethnic partnering ideally exemplifies the consequences of individualisation, since it suggests that the partnering choices of the individual have taken precedence over any pressure from family or community to partner within one's ethnic group. Self-fulfilment and, often, romantic love are highly valued and are prioritised over the maintenance of the group.

Given the long history of cultural, social and economic division between indigenous and non-indigenous Australians, it is important to monitor patterns of intermarriage across this divide. Similarly, the subject of intermarriage between migrant communities is of particular significance in the multicultural setting that is Australian society. It may seem obvious that between ethnic groups living within a given society, exogamy will increase over time. Yet the international literature suggests this is not necessarily the case. Rather, integration by this measure is highly specific to ethnic groups, and cultural similarity or dissimilarity can play a significant role (Muttarak and Heath 2010; Dribe and Lundh 2011; Kalmijn and van Tubergen 2010). Thus, although well-established Anglo-Celtic and European migrant communities in Australia have created expectations of ever-increasing intermarriage, we are yet to find out whether the partnering behaviour of more recent waves of migrants from other parts of the world will follow the same pattern.

These subjects are tackled in the chapter using data from the 2011 census. The chapter suggests that partnering across ethnic group boundaries – many of which once seemed impermeable in Australian society – continues to increase in this multi-cultural setting. To the extent that intermarriage is a useful measure, it remains the case that some ethnic groups integrate more quickly than others. Yet all signs are that intermarriage is increasing with each subsequent generation of migrants from the Middle East and Indian subcontinent, as it has among the descendants of European migrants from decades past.

Walker and Heard extend previous Australian research in this field through the use of log-linear models. This enables the authors to allow for the size of different ethnic groups within the Australian population. A fascinating finding to emerge from this is that the majority group of 'Australians' (whether measured by birth-place or self-identified ethnicity) are among the most likely to intermarry – a fact concealed by the raw percentages, which largely reflect opportunity. This openness on the part of the majority ethnic group, combined with the propensity for Australians of all ethnicities to intermarry given time and opportunity, strongly suggests that ethnic intermarriage will continue to increase.

Meanwhile, partnering between indigenous and non-indigenous Australians remains highly context-specific. In this respect, the urban indigenous population is very different from the regional (rural and remote) indigenous population, with intermarriage much more common among indigenous Australians living in the nation's capital cities. And yet, to a large extent, location may be a proxy for ancestry. Walker and Heard find that people whose sole nominated ancestry was 'Australian Aboriginal' demonstrate a particularly high rate of homogamy. These individuals tend to live in more remote parts of Australia where opportunities for intermarriage are limited.

In Chap. 10, which is devoted specifically to Indigenous family formation (see also Sect. 1.2.3 below), Biddle and Johnstone further investigate the propensity of Indigenous Australians to partner non-Indigenous Australians. In keeping with Chap. 4, but using alternative data and methods, Biddle and Johnstone find that Indigenous Australians living outside the major cities are significantly less likely to have a non-Indigenous partner than those living in a major city. Using regression

analysis, they are able to confirm that this is primarily due to the larger Indigenous proportion of the population outside the cities. Once again, this seems to underline the role of opportunity in intermarriage.

Also consistent with Chap. 4, Indigenous Australians with relatively low levels of education and those not employed are less likely to have non-Indigenous partners. Patterns of Indigenous partnering are associated with socioeconomic outcomes as measured by employment, income and education. Biddle and Johnstone show that non-Indigenous partners of non-Indigenous Australians have the most favourable socioeconomic outcomes, and Indigenous partners of Indigenous Australians the least favourable, with mixed couples falling somewhere in between on most indicators. This reinforces the sociological notion of interethnic marriage as a means of social mobility among disadvantaged groups.

1.1.3 Relationship Dissolution and Repartnering

Partnership formation trends are reflected in relationship dissolution trends. Like the crude marriage rate, the crude divorce rate has stabilised since beginning of the new century, and at 2.2 per 1,000 people in 2011 was lower than in any other year since the introduction of no-fault divorce in 1976 (ABS 2008, 2012). Census data also shows that the proportion of Australians who were separated or divorced has remained stable over the decade to 2011, at 11 %. In Chap. 5, 'Relationship Dissolution', Hewitt and Baxter point out that the characteristics of divorcing couples also continue to change. In the first decade of the twenty-first century, divorcees have become older and have been married for longer.

Yet it is very likely that official statistics underestimate the extent of relationship dissolution among Australians, in large part due to the prevalence of alternatives to marriage. Hewitt and Baxter argue that some unstable marriages have been replaced by cohabiting relationships, the dissolution of which is not captured by official statistics. The longitudinal HILDA data is employed to investigate the stability of Australian partnerships, both married and cohabiting, since the turn of the century.

Consistent with official statistics, the authors find that marriage, and early marriage in particular, is relatively stable. The authors demonstrate that the hazards of relationship dissolution are similar for those who marry with or without a period of prior cohabitation. Consistent with other recent research, the increased risk of divorce for those who cohabit prior to marriage appears to have disappeared, perhaps as the role of cohabitation as a pre-marital stage is cemented. However, cohabiting relationships that do not proceed to marriage have a higher likelihood of dissolution at all relationship durations. This likelihood is particularly high within the first 3 years of a cohabiting relationship. Indeed, the authors suggest, marriages that might once have ended within a few years have been replaced by cohabiting relationships, lowering the risk of divorce in early marriage and the overall divorce rate.

Few studies, if any in the Australian context, have investigated the consequences of relationship breakdown for cohabiting couples. Importantly, Hewitt and Baxter compare the financial and health consequences of relationship dissolution from marriage and from cohabitation, finding that separation from cohabitation has far less severe consequences for finances and health than does separation from marriage. This is attributed to the fact, identified in previous research, that those in cohabiting relationships have measurably lower levels of relationship commitment. Again, this finding supports the view that marriage remains the ultimate commitment, further reinforcing the conclusions of Chap. 3.

The rise of cohabitation not only complicates the study of relationship dissolution but that of repartnering, too (Chap. 6). While a substantial body of research has considered remarriage after the dissolution of a former marriage, this represents only one of four dominant forms of repartnering identified by Gray. Gray extends the study of this subject in the Australian context to include cohabitation with a new partner following a marriage; marriage to a new partner following cohabitation with a former partner; and consecutive cohabitations. Indeed, the HILDA data used in Chap. 6 suggests that repartnering in Australia, as has been shown for other countries, now more often takes the form of cohabitation than marriage.

Consistent with the finding from Chap. 5, that the termination of a cohabiting relationship has less severe consequences than the termination of a marriage, Chap. 6 shows that those who were previously cohabiting are quicker to repartner (about half within 5 years) than those who were previously married (about half within 9 years). The type of new partnership is also important to relationship timing, with Gray revealing a much slower time to marriage than cohabitation, regardless of the form of the previous relationship. Again, this reinforces the finding that marriage continues to be viewed as the more serious and more considered commitment.

1.2 Fertility

1.2.1 Contraception and Fertility Desires

The book's coverage of the subject of fertility begins with contraception (Chap. 7) – the means by which contemporary Australian women and their partners control fertility. Gray and Arunachalam find that partnered Australian women rely predominantly on the oral contraceptive pill for contraception. At almost 50 %, the choice of this method among users of contraception is higher than in comparable countries, and only continues to increase. While tubal ligation and vasectomy are also more commonly used in Australia than in other countries, these methods are decreasing in popularity. The use of condoms, although relatively high in Australia, is also declining. Meanwhile, the use of IUDs and implants is rising.

Gray and Arunachalam point out that countries can and do achieve similar levels of fertility by different contraceptive means. In recent years Australia has recorded a TFR similar to that of France or Norway. Use of the contraceptive pill is high in

all these countries, but highest in France. Condom use is higher in Australia than in France or Norway. IUD use in Australia is lower than in these countries and in all countries considered in Chap. 7, although the authors suggest that the use of IUDs in Australia will continue to increase.

By these means, what level of fertility are Australians seeking to achieve? In Chap. 8, Arunachalam and Heard find that the average family size desired by Australians is over two children. It is therefore higher than the TFR suggests will be achieved by current cohorts of childbearing women, and higher than the average family size achieved by women currently completing their childbearing, according to the CFR (see Chap. 9).

Enabled by the longitudinal HILDA data, the analysis by Arunachalam and Heard examines the factors associated with individuals' changing preferences over time. The authors demonstrate the significance of a number of variables classified as life course, structural and values/orientation factors. A change in relationship status from single to cohabiting or married is found to be particularly significant. This is perhaps unsurprising, but shows that desires, independently of expectations, are shaped by relationship circumstances and reinforces the importance of partnering trends to fertility trends. Age is also critical. While it is well understood that the limitations on women's capacity to bear children diminish with age, this analysis shows that both men and women generally revise their fertility preferences downwards as they reach their late 30s and early 40s, regardless of how many children they already have.

Men's preferences are also affected by any change in how they rate their level of satisfaction with economic opportunities, while women who rate their careers as a high priority are particularly likely to revise their fertility preferences downwards over time. Although it has been suggested that changes in the policy setting increasingly enable women to combine their work and family goals (McDonald and Moyle 2010), this finding suggests that career-oriented women are still settling for fewer children than they would choose in the absence of career constraints.

1.2.2 Fertility Differentials

One of the most interesting demographic developments in the first decade of the twenty-first century was an increase in fertility, as measured by the total fertility rate (TFR). However, a period measure such as the TFR may be affected by the timing of childbearing. In Chap. 9, Heard and Arunachalam discuss the alternative means of assessing fertility change over the longer period – using cohort fertility rates calculated from census data. CFRs have been in long-term decline, and the analysis in Chap. 9 shows that this decline continued in the first decade of the twenty-first century. Women aged 40–44 years in 2011 were the first to reach this age group with a fertility rate of less than 2.0. While they may yet exceed this average, they will almost certainly remain the first cohort to record completed fertility that is below replacement level. Yet decline slowed markedly from 1996 and has stabilised in the

first decade of the twenty-first century. Among Australian women aged in their early twenties, CFR decline has all but ceased. It seems likely, therefore, that cohort fertility will follow period fertility and will stabilise in the years ahead.

The cohort fertility rates presented in Chap. 9 further enable an analysis of fertility differentials within the Australian population. Educational attainment has long been a strong determinant of fertility differentials in Australia, and is prioritised in the analysis by Heard and Arunachalam. The chapter therefore adds a fertility dimension to the consideration of the role of socioeconomic status in family formation. Degree-qualified women have a distinctive fertility pattern. Their lower fertility is partly attributable to higher levels of childlessness, but is also due to having the highest proportion of women at parity one and a strong concentration (40 %) at parity two. By contrast, women with lower levels of education and lower family incomes, especially those who are lone parents, record higher CFRs. These women have higher proportions at parities three or more, which more than compensate for lower proportions at parities zero to two.

There is cultural preoccupation with educated women who must juggle their career ambitions and family life. We often hear of educated women 'leaving it too late' to have children, or 'missing out' altogether. A higher proportion childless suggests there may be some truth to this, although it is impossible to know to what extent childlessness is chosen.

Nevertheless, when relationship status is included in the analysis, the picture changes somewhat. Among degree-qualified women, married women have the most children. But among women without post-school qualifications, lone parents have the most children. Thus these findings deepen our understandings of the links between socioeconomic status and family formation. The normative link between marriage and childbearing appears strongest for degree-qualified women. While more privileged women may experience the highest levels of childlessness, they are also best able to 'achieve' the normative family, consisting of a husband and (most often) two children. Among women with lesser qualifications or no qualifications, it seems that relationship status is less important to childbearing.

In this context, it is fascinating to consider the 30-year time series of CFR change over time. Although more educated women still have lower CFRs, CFR decline among degree-qualified women has ceased. It may be that educated Australian women have reached a natural endpoint in their transition to low fertility, and are not prepared to limit their family sizes any further. It might also suggest that educated women are finding it easier to combine work and family goals. If this is the case (keeping in mind that the data on completed family size reflects the fertility of a generation which has now finished childbearing), the CFRs of younger educated women currently bearing children may yet increase. This would further reinforce the link between privilege and family formation, with educated women increasingly able to 'have it all'.

Yet Heard and Arunachalam suggest the future picture regarding change in cohort fertility will be determined in large part by women with lower levels of educational attainment. The greatest decline in the decades to 2011 occurred among women without post-school qualifications, and despite degrees becoming increasingly common, women without post-school qualifications still constitute the largest

group in Australia. It remains to be seen whether fertility decline continues for this group, or whether it stabilises at a level that is higher than the plateau reached by educated women. In this case educational differences, albeit smaller, may persist. Alternatively, if fertility among less educated women continues to decline in contrast to the stabilisation of fertility among more educated women, educational differences may become much less important.

1.2.3 Indigenous Fertility

The analysis of Indigenous fertility presented in Chap. 10 is also, in one respect, a story of socio-economic differentials. Despite the problematic nature of Indigenous demographic statistics, Biddle and Johnstone are able to demonstrate that demography powerfully illuminates Indigenous disadvantage.

Early childbearing remains a persistent feature of Indigenous demography. Fertility peaks at 20–24 years, and teenage fertility is high. Though the fertility of Indigenous women remains higher than the fertility of non-Indigenous women, it has declined in recent decades. Biddle and Johnstone demonstrate that there has been a decline in the proportion of women having children before the age of 25 years. Having been below half for 11 of the 14 years for which data is available, this proportion reached 42 % in 2011. This is nevertheless a high proportion, particularly when compared to 12 % for the entire female population.

Interestingly, the regional disaggregation shows that states with the largest Indigenous populations have the highest Indigenous fertility rates. While considerable urban/regional fertility differentials have long featured among all Australian women, these are greater still among Indigenous women. Recall that Indigenous women living outside the major cities are also less likely to have a non-Indigenous partner. The regression analysis presented in Chap. 10, along with the odds ratios presented in Chap. 4, show that homogamous partnering within the Indigenous population is best predicted by the Indigenous population share of an area, but also by low education and non-employment.

These data point to demographic divergence between Indigenous Australians living in more remote areas and city-based Indigenous Australians, for whom intermarriage with non-Indigenous Australians functions as a means of upward social mobility. Biddle and Johnstone demonstrate that Indigenous Australians with non-Indigenous partners fare better on most socioeconomic measures than those with Indigenous partners. Endogamy or exogamy are also means by which socioeconomic status is transmitted from one generation to the next. Intermarried couples have fewer children, on average, than Indigenous-only couples, and children in families with both Indigenous and non-Indigenous adults tend to have better outcomes across a number of socioeconomic measures than those in households with Indigenous adults only.

Throughout Chap. 10, Biddle and Johnstone highlight the way in which issues of Indigenous identification problematize demographic measurement. Whether or not the Indigenous population continues its high rate of growth will, to some extent,

depend on how the children of mixed Indigenous and non-Indigenous parentage identify. In turn, patterns of identification determine the parameters of policies aimed at reducing Indigenous disadvantage.

1.2.4 Same Sex Family Formation

The final chapter in the book (Chap. 11) is devoted to family formation among same-sex couples. Dempsey describes the way in which 'non-heterosexual' families have become increasingly visible, and draws together the available data enumerating these alternative family forms. Same-sex couples have increased dramatically across census counts, more than tripling in the 5 years to 2011 to reach 33,700. On the other hand, the percentage of these couples with resident children has not increased greatly in recent years, and stood at 12% in 2011. This equates to a relatively small number (6,100) of Australian children and young adults less than 25 years living in (mostly female) same-sex couple families.

In important ways, the families of same-sex attracted Australians resemble those of heterosexual Australians, since cohabiting couple relationships are popular within this group and are a primary source of intimacy and care. Yet, as Dempsey shows using survey as well as census data, there are also large numbers of same-sex attracted Australians in relationships that are not cohabiting or even monogamous, who do not have or live with children, who live alone or in shared households, and who prefer to lean on friends rather than family for support.

This dichotomy is reflected in the debate about the legalisation of same-sex marriage. The push for gay marriage rights has somewhat concealed the fact that only a slim majority of same-sex attracted Australians desire this form of relationship recognition, according to the survey data. Many are unconcerned about relationship recognition and some oppose this 'assimilationist' push. Dempsey concludes that the recognition of diversity within the same-sex attracted population would seem to be key. Certainly, diversity is a fact of contemporary Australian family formation that policymakers must acknowledge.

1.3 Conclusion

Second demographic transition theory holds that diversity amongst post-industrial families is a consequence of increasing individualisation (Van de Kaa 1987; Lesthaeghe and Surkyn 1988; Lesthaeghe 2010). This volume supports the view that Australians are increasingly open to forming families in non-traditional ways. While marriage remains popular, the majority of Australians cohabit prior to marriage (Chap. 2), and cohabitation has also become the most common form of repartnership after the dissolution of a marriage (Chap. 6). The statistics suggest that Australians exercise increasing freedom in partner choice, and that social norms

around partner choice are ever more relaxed. Interethnic partnering continues to increase, between Indigenous and non-Indigenous Australians, and between those of different migrant backgrounds (Chap. 4). Same-sex partnerships have greatly increased in number (Chap. 11).

Interestingly, as partnership forms have diversified, marriage has not diminished in value. Attitudinal data suggests that the institution continues to command respect as the ultimate form of commitment (Chap. 3). The termination of a marriage is still a relatively common occurrence, with around a third of current marriages expected to end in divorce, but the survival rates of marriages are much higher than those of cohabiting relationships, and the breakdown of a marriage continues to have greater health and financial consequences than does the breakdown of a cohabiting relationship (Chap. 5).

Yet there is evidence that patterns of family formation diverge along socioeconomic lines, rather than reflecting individual freedoms. Several chapters in this book examine partnering trends at the sub-group level. Chaps. 2 and 3 respectively include discussion of which Australians marry and which Australians choose cohabitation and LAT relationships. Educational differentials feature in patterns of repartnering after separation or divorce (Chap. 6), and in patterns of interethnic partnering (Chap. 4). The same might be said of the analysis of fertility in this book. Socioeconomic differentials, evident even in patterns of contraceptive use (Chap. 7), are particularly prominent in fertility outcomes. Although educational fertility differentials have diminished, education remains a strong determinant of cohort fertility rates, and of the type of relationship into which children are born (Chap. 9).

In this respect, Australia is not unique. Cherlin (2012: 599) reviews a 'growing social-class divergence in family patterns', both in the United States and across the western world. This is attributed to the increased inequality of economic opportunities in a globalised economy. The degree-qualified can obtain good jobs, marry each other (at older ages but in larger proportions), pool their resources, wait until marriage to have children, and are increasingly less likely to divorce. The less educated, whose jobs are insecure in a post-industrial economy, are less likely to marry or stay married, and more likely to have children in short-lived cohabiting relationships or as single parents.

There are other reminders of the enduring tension between structure and agency. The best example is perhaps found in patterns of intermarriage between Indigenous and non-Indigenous Australians (Chaps. 4 and 10). With considerable regional variation primarily reflecting the concentration of the Indigenous population in particular (especially remote) parts of Australia, exogamy appears to be limited by a lack of opportunity for meeting non-Indigenous partners. This is especially the case where participation in education and employment is low, limiting this particular means of achieving upward social mobility.

These findings sit uncomfortably with Lesthaeghe's argument of family diversity reflecting increased individualisation. While Australians forming families today may encounter more choice than did their counterparts in past generations, these choices remained constrained by gender, ethnicity and, above all, socioeconomic status.

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Chapter 2
Entering a Union in the Twenty-First Century: Cohabitation and 'Living Apart Together'

Ann Evans

2.1 Introduction

Australians entered the twenty-first century having experienced 50 years of profound change in the nature of relationship and family formation, occurring during a period of great social and economic transformation throughout the western world. This change has been characterised by a dramatic rise in cohabitation as an alternative to marriage and/or as a 'trial' before marriage. Much of the choice around relationship formation has been shaped by the increasing educational attainment and employment of women (Blossfeld and Huinink 1991). This chapter explores the early stages of adulthood, a time when young Australians are making decisions about entering into intimate relationships.

The most notable impact of this transformation on young people relates to increased access to reproductive control, changing attitudes towards sex and partnerships outside marriage and change in the structure of the labour market. The introduction of the contraceptive pill and easier access to abortion reduced the need for early marriage due to pregnancy. Alongside this were changes in attitudes leading to a widespread acceptance of non-marital relationships and a rise in the number of couples choosing cohabitation instead of marriage, particularly for first relationships (Evans 2013). The economy was also transforming with the modernisation and feminisation of the labour market. This lead to greater reliance on post-secondary education and a dramatic increase in post-secondary education for women.

This chapter describes the nature of first union formation in the first 10 years of the twenty-first century. It begins with a review of the literature on cohabitation in Australia to provide an historical context to current relationship formation patterns.

A. Evans (✉)
Australian Demographic and Social Research Institute,
The Australian National University, Canberra, Australia
e-mail: Ann.Evans@anu.edu.au

It then provides an analysis of first relationship formation patterns of 18–30 year olds from 2001 to 2011, focussing on the choice between cohabitation and direct marriage.[1] Finally, it considers the nature and prevalence of 'living apart together' (LAT) relationships between 2005 and 2011.

The data for this chapter are drawn from the Household, Income and Labour Dynamics in Australia (HILDA) survey (see Technical Appendix). The data are used in three ways. Firstly, the data are used to examine the importance young people place on cohabitation and marriage. These data are drawn from a youth module collected in 2004. Secondly, data from 2001 to 2010 are used to model the choice of union type for first relationships. And finally, data from 2005 to 2008 are used to examine LAT relationships.

2.2   Cohabitation in Australia

2.2.1   Prevalence

The Australian Bureau of Statistics (ABS) first collected data specifically on non-marital cohabiting relationships in 1982. At this time it was estimated that approximately 5 % of all couples were living together without registering a marriage (Table 2.1). This rose to 16 % in 2011.

Another measure of prevalence is the percentage of marriages in a given year that were preceded by cohabitation. Cohabitation prior to registered marriage has increased over the last 20 years. In 1992, just over half of all registered marriages were preceded by cohabitation (56 %) (ABS 1994). In 2012, over three quarters of marriages were preceded by cohabitation (78 %) (ABS 2013). The percentage of marriages preceded by cohabitation peaked at 79 % in 2010 and dropped slightly in the two following years.

These figures underestimate the experience of cohabitation in the population. While 12 % of couples were cohabiting in 2001, the percentage of people who had ever cohabited was much higher: using HILDA data, Dempsey and de Vaus (2004)

Table 2.1 The prevalence of cohabitation in Australia

Year	Cohabiting couples as % of all couples
1982	5
1992	8
1996	10
2001	12
2006	15
2011	16

Source: ABS (2012) and Weston and Qu (2013) for 2011 figure

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[1]A direct marriage is one that occurs without a period of cohabitation prior to the wedding.

estimate that 20 % of the ever-partnered population in 2001 had cohabited at some stage. Cohabitation is strongly associated with age. For those under 20 years of age who have ever been in a live-in relationship, 90 % have had at least one cohabiting relationship. This figure drops to 68 % at age 20–24 and 39 % at age 25–29 (Dempsey and de Vaus 2004).

These proportions all refer to people who have ever been in a live-in relationship. In the early stages of adulthood there are many people who have never been in a live-in relationship. To better gauge the spread of cohabitation across these younger age groups it is perhaps more important to consider those who have ever lived in a cohabiting relationship as a percentage of the total population. These calculations show that 18 % of 20–24 year olds and 29 % of 25–34 year olds have ever cohabited (Dempsey and de Vaus 2004).

2.2.2 Attitudes

In 1971 over two thirds (68 %) of married women living in Melbourne indicated that they would be "extremely horrified", "considerably upset" or that they had "failed as a parent" if a son announced he was going to cohabit. If the announcement had been from a daughter, half (52 %) of these women would be more upset than if the announcement was from a son (Caldwell et al. 1988).

There have been various attempts to measure attitudes towards cohabitation in Australia. The Australian Survey of Social Attitudes in 2003 asked respondents to indicate whether they thought cohabiting couples, or cohabiting couples with children, constituted a family. There was general agreement that a cohabiting couple with children does constitute a family (79 %), but less so when children were not present (63 %) (Evans and Gray 2005).

The International Social Survey Program has collected data on attitudes to family over time. Questions were asked about cohabitation in 1994, 2002 and 2012. These data indicate that over the past 20 years attitudes towards cohabitation have become more liberal. In 1994, 28 % disagreed with the statement "It is alright for a couple to live together without intending to get married." In 2002, 18 % disagreed and in 2012 only 14 % disagreed.

Using the 2005 HILDA survey, Qu and Weston (2008) find a higher (21 %) level of disagreement that "it is alright for an unmarried couple to live together even if they have no intention of marrying". Among those aged 15–20 only 14 % disagreed and among those aged 20–29, 17 % disagreed.

2.2.3 Characteristics of Cohabiters

In the early 1990s, Glezer (1991) found that economic factors are important in the decision to cohabit, but love, friendship and companionship are also very important. Four studies since the turn of the twenty-first century touch on similar issues.

Lindsay (2000) suggests that the reasons people choose cohabitation are more pragmatic than romantic. Lewis (2001) considers economic security to be a driver of cohabitation decisions. Cohabitation is seen as a rational response to low male wages. White (2003) finds that young people consider the 20s to be a period characterised by freedom and autonomy, and that there is some reluctance to partner seriously before age 30. Carmichael and Whittaker (2007) find that cohabitation 'just happens' as shared nights together increase.

In the 1980s Antill et al. (1983) reported the reasons men gave for cohabiting as having doubts about need for and nature of formal marriage, and greater gender equality in cohabiting relationships. Women agreed but also highlighted that they were not ready to settle down or to have children. They also found two major barriers to cohabitation: parental disapproval and religious objections (Antill et al. 1983).

Religion is strongly associated with relationship formation. Cohabitation is the highest among people who are not religious or claim no religious affiliation (Dempsey and de Vaus 2004; Glezer 1991). The largest religious groups in Australia (Catholic, Anglican) have the highest rates of cohabitation of all people who report a religious affiliation, whereas the lowest rates are found for those whose affiliation is Islam, Greek Orthodox, Sectarian or Pentecostal (Dempsey and de Vaus 2004). Khoo (1987) also finds cohabiters are less likely to be religious, as measured by patterns of church attendance.

Families and parents shape attitudes and behaviours surrounding cohabitation and relationship formation. Parental divorce is associated with cohabitation (Glezer 1991). People who have experienced parental divorce are more likely to cohabit than those who have never experienced divorce. Cohabitation is highest among Australians with English-speaking backgrounds (Khoo 1987; de Vaus 2004).

In the second half of the twentieth century cohabitation was seen as a relationship type of the educated middle classes. These were the 'social trailblazers' who experienced free tertiary education and high levels of economic opportunity. Glezer (1991) found that Australian cohabiters were most likely to have tertiary qualifications.

In the twenty-first century, research indicates that cohabitation, particularly as a setting for children, is now primarily a feature of couples with lower economic or educational status. A linear negative relationship with education has been termed the "pattern of disadvantage" and has been found across Europe and the US (Perelli-Harris et al. 2010; Gibson-Davis et al. 2005).

This pattern has also emerged in Australian research. Birrell et al. (2004) find that cohabitation is increasing for men with low education and income. Using census data from 1996 to 2006 Heard (2011) documents the change in Australian partnership patterns by level of education. The percentage of men and women cohabiting has increased at every age and for every education group, but rates of cohabitation are lowest among the tertiary-educated. For those under 30 the most dramatic increases have been among men and women with skilled vocational qualifications, resulting in an inverted U-shaped relationship between cohabitation and education: men and women with vocational qualifications have higher rates of cohabitation than do those with more or less education.

2.3 Importance of Cohabitation in Early Adulthood

The previous sections summarise our current understanding of cohabitation in Australia. But just how important is cohabitation to young people? In 2004 the HILDA survey included a youth module to collect information relevant to young people. Participants aged less than 30 were asked how important they felt it was for them to be living in a long-term relationship.[2] They were asked to consider this question across two time periods: How important it was at the time of the survey ('now'), and how important they thought it would be for them at age 35.

The results show a dramatic difference between the present and future time periods (Fig. 2.1). For the present, the percentage indicating that living in a long-term relationship is not important decreases with increasing age. The percentage indicating that it is very important to them now increases with increasing age. There is virtually no variation by age in the percentage of young people who report that cohabiting is somewhat important to them now.

When asked about the future there is no difference in the responses from the different age groups even though there is a 15-year age spread. At each age 70 % of respondents predicted that it would be very important that they were living in a cohabiting union at age 35. It is interesting that there is no difference found here. Those aged 15–19 are looking forward 15–20 years, compared to 5–10 years for the 25–29 age group. It would be expected that those closest to the future age (35) would have similar responses regarding both the present and the future. This indicates a strong normative age for relationship formation among young
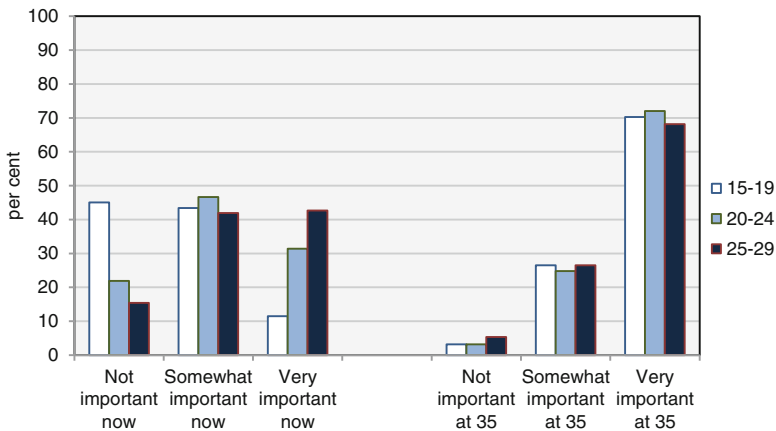
Fig. 2.1 The importance of cohabitation, now and at age 35

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[2] 'Long-term relationship' could refer to a marriage or a non-marital cohabitation.
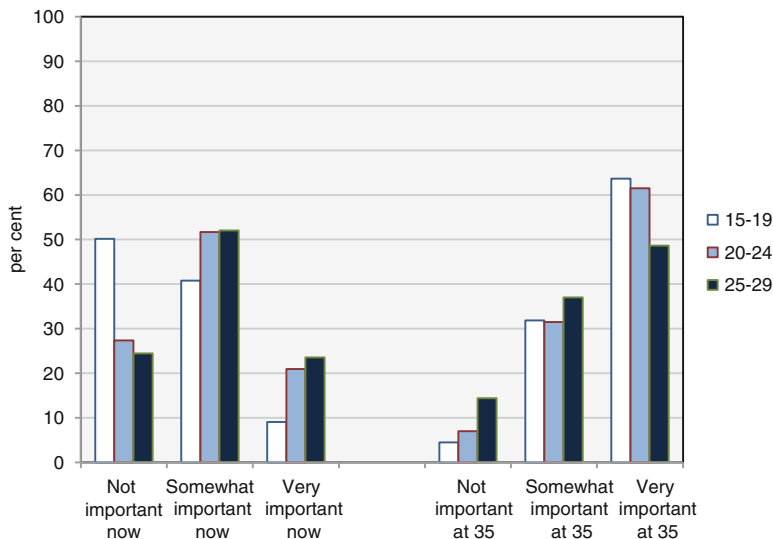
Fig. 2.2 The importance of marriage, now and at age 35

Australians: most expect that forming a living together relationship would be a high priority between ages 30 and 35.

A similar question was asked about the importance of marriage but the pattern of responses was markedly different. For the present, respondents aged 15–19 placed similar importance on marriage as they did on cohabitation (Fig. 2.2). Among those aged 20–29 a larger percentage said that marriage was somewhat important than said that cohabitation was somewhat important. People in these age groups were more likely to say that marriage was not important than they were to say cohabitation was not important. The percentage who indicated that marriage is very important to them now did increase with age, as was the case for cohabitation, however only 21 % of those in their 20s placed a high importance on marriage.

The difference between now and age 35 is very similar for the 15–19 year olds irrespective of whether they are thinking about cohabitation or marriage. For the 25–29 year age group there is a different pattern evident when thinking about marriage in the future compared with cohabitation. The percentage indicating marriage is very important when considering the present increases with age. When considering the future the pattern is reversed, with older respondents placing less importance on marriage at age 35. As young people reach their late twenties, they place less importance on marriage occurring within the next few years.

The above results are based on never married respondents, but a significant proportion of young people are married before age 30. Figure 2.3 presents HILDA data on relationship status for each single year of age. Wave 8 (2008) of the survey is used as it is the most recent data with information on LATs. Below age 23, being single is the most common status and the combined proportions of respondents who are single and LAT sits above 50 % until age 24.
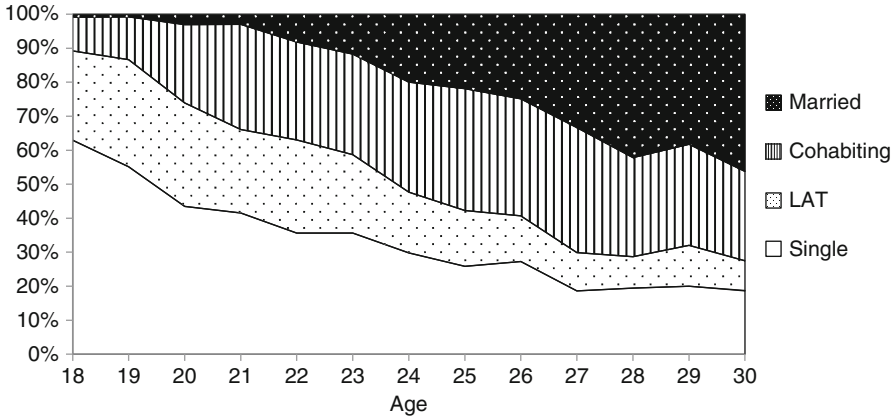
Fig. 2.3 Relationship status by age, 2008

Cohabitation grows very quickly in the early 20s and is dominant between ages 24 and 27. By age 28, marriage becomes the most dominant status and by age 30 close to 50 % of young people are married. This pattern of relationship status by age clearly reflects increased time spent in education and delayed relationship formation.

2.4 Entering the First Relationship

Young people in the early twenty-first century see living together relationships as an important aspect of their lives now and in the near future. More importance is placed on cohabitation than marriage. We also know that the majority of marriages are preceded by cohabitation. So what characteristics are associated with the choice of cohabitation or marriage for a young person's first live-in relationship? This section uses prospective longitudinal data from HILDA to examine entry into the first live-in relationship. Live-in relationship (or live-in union) in this case refers to any relationship where the couple co-resides. This could be either a marriage or cohabitation. This analysis examines the impact of education, religion, and family background on whether the first live-in relationship is a marriage or cohabitation.

The sample includes everyone aged less than 30 years in 2001 (wave 1) who has not yet entered a live-in relationship. This group are followed across each wave of data collection until they experience their first relationship. The first relationship is identified as being either cohabitation or a marriage, which is the dependent variable for this analysis. Marriage here refers to direct marriage: that is, marriage where the couple have not lived together prior. As discussed earlier, it is expected that education, religion and family background are all important in determining the type of first live-in union. This is tested using a logit regression model and the results are presented in Table 2.2.

Table 2.2 Logit model predicting marriage over cohabitation for first live-in relationship

	Odds ratios
Sex	
Male (ref)	–
Female	1.5
Age	1.05
Highest education level (at first union)	
University	2.85***
Certificate	1.22
Year 12 (ref)	–
Year 11 or below	2.98**
Importance of religion	
Not important	0.30***
Somewhat important (ref)	–
Important or very important	10.22***
Missing	1.20
One or both parents born in non-English speaking country	
No (ref)	–
Yes	1.63*
Parents divorced	
No (ref)	–
Yes	0.28***
Not applicable/unknown	1.25
Father's education	
No post-school qual (ref)	–
Post-school qualification	2.51***
Missing	1.23
N	911
Log likelihood	−206.79
Prob>chi2	<0.001

*p<0.10; **p<0.05; ***p<0.01

One of the difficulties in using education as a predictive variable for young people is that many of them may be still studying during the period of observation. In this analysis, education is measured at the wave where the first relationship is observed. The measure is the highest level of education obtained at that time: bachelor degree or higher, diploma or certificate, complete secondary or incomplete secondary. It has been shown that there have been changes in the composition of the cohabiting population and that cohabitation (for those under 30 years) is now most common among those with vocational qualifications and less common for those with no post-school qualifications or with bachelor degrees or higher (Heard 2011). However, it is not known if this same inverted u-shaped pattern is found for the type of first live-in relationship.

Previous research has consistently identified religion as having a strong negative association with cohabitation (Dempsey and de Vaus 2004; Glezer 1991;

Khoo 1987). Various measures have been used to explore the impact of religion on relationship choice, including religious affiliation, church attendance, and importance of religion. The measure used here relates to the importance of religion in a person's life. The categories are: important or very important, somewhat important, and not important. Fifteen per cent of the sample has missing information on this question so a missing category is also included in the model. The individuals with missing data are not significantly different from the reference category (somewhat important) in the models.

Families provide role modelling and values that are crucial to the development of individual attitudes and desires around relationship formation. Three measures describing the family background are used. The first is the ethnic composition of the family. The only measure possible for this analysis is whether one or both parents were born in a non-English speaking country. This measure is often used to determine differences that might be based on language or migrant status. Typically, those with overseas-born English-speaking parents behave in a similar way to native-born Australians. This measure has limitations as it includes migrants and non-migrants, those who have been here since infancy and those who have arrived recently, and those whose parents have been here since infancy or have arrived recently. These factors may be important since the environment in which an individual attended school, particularly secondary school, can have a large bearing on his or her attitudes to family formation.

The second measure of family background is whether or not the young person's parents have been divorced. This measure includes those whose biological parents ever separated or divorced as well as a small number whose parents never married. Experiencing parental divorce can impact family formation decisions in both directions. Young people may be deterred from marriage as they see that it does not always work, or they may be drawn to marriage as a way to capture the intimacy and closeness that their parents did not maintain. Some people were not asked about parental divorce if one or both of their parents died before they were teenagers. An additional category is used to control for those cases where parental divorce is not applicable.

The third measure of family background is an attempt to capture the socio-economic position of the family. This could potentially be measured by parental income (only available for some of the respondents in the analysis), mother's or father's occupation, or mother's or father's level of education. Education is often used as a proxy for occupation or income. Given the nature of the data available in HILDA, and the overarching interest of this chapter in education, this analysis uses father's highest level of education as an indicator of socio-economic status. The measure compares those whose fathers had no post-school qualification with those whose fathers did have a post-school qualification. An indicator is used to account for those who did not know their fathers' highest level of education. The individuals with missing data are not significantly different from the reference category (no post-school qualification) in the models.

The results of the logit analysis, controlling for sex and age at first live-in relationship, are presented in Table 2.2. Education, as predicted, shows a u-shaped
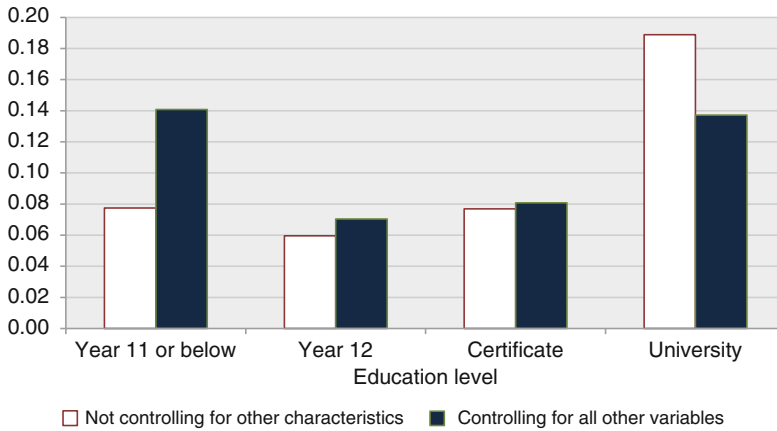
Fig. 2.4 Predicted probability of first live-in union being marriage by level of education

relationship with relationship type. Young people with a bachelor degree or higher have higher odds of the first relationship being a marriage rather than a cohabitation when compared to those who have completed secondary school. Those with incomplete secondary school also have higher odds of marriage than do those who completed secondary school. Interestingly this u-shaped relationship does not exist between education and first union type if the other variables in the model are not controlled for. Figure 2.4 presents the predicted probability of direct marriage by education level bivariately and controlling for the variables in the model reported in Table 2.2.

Considering education on its own (light bars), the predicted probability of direct marriage is 0.18 for those with a university degree. This stands out from those with lower levels of education where the predicted probability ranges between 0.06 and 0.08. When compared with the predicted probability of direct marriage from the model (controlling for religion, ethnicity, and family background) the nature of the relationship between marriage and education changes. Here (dark bars) the u-shaped relationship is obvious, as those with the least education and those with the most education both have a predicted probability of direct marriage of 0.14. This is double the probability of marriage for those who have completed secondary or a vocational qualification. This example highlights the importance of controlling for other factors in order to avoid spurious bivariate results.

Religion does not show a different pattern of prediction when controlling for the other variables in the model. It does, however, show a strong linear relationship with union type (Table 2.2). The more importance a young person places on religion in his or her life, the greater the odds of direct marriage. Compared to people who report religion being somewhat important in their lives, those who report religion being unimportant have lower odds of direct marriage. Those who report religion being important or very important have higher odds of direct marriage than do those who report religion being somewhat important in their lives.

The variables measuring the impact of family background also show an association with the type of first union. Parental divorce is associated with decreased odds of direct marriage. This suggests that, overall, parental divorce acts to deter young people from direct marriage in their first relationship. Having a parent born in a non-English speaking country is associated with increased odds of direct marriage when compared to those with both parents born in Australia or another English-speaking country. Father's level of education is also associated with first union choice. The odds of direct marriage are higher for young people whose fathers have post-secondary qualifications than are the odds of direct marriage for those whose father have no post-school qualifications.

This analysis shows that education, religion and family background are all important predictors of direct marriage for first live-in union for young people in Australia. The results indicate that in an era with very high levels of cohabitation, direct marriage is becoming increasingly selective. Those who indicate that religion is important or very important are much more likely to choose marriage as a first live-in relationship. Direct marriage is also more likely for those with a bachelor degree or higher and those with incomplete secondary school.

2.5   LATs: An Alternative to Cohabitation or Simply Dating?

Very little is known about LAT relationships in Australia. Previous research is limited to a descriptive typology (Reimondos et al. 2011) and recent work on older people in LAT relationships (Malta and Farquharson 2012; Upton-Davis 2012, 2013). In 2005, the HILDA survey contained questions specifically related to LAT relationships. Reimondos et al. (2011), using this data, find that LAT relationships are widespread in Australia with 24 % of the 'single' population reporting a LAT relationship. LATs are more likely to be childless and never-married compared to single, cohabiting or married people.

The HILDA survey provides a unique opportunity to measure the incidence of LATs as well as other characteristics of these relationships. There has been debate in the literature about whether LATS are simply casual dating relationships or if they are a form of committed relationship that is being used as an alternative to cohabitation (Haskey and Lewis 2006; Ermisch and Siedler 2008; Trost 1998). For the age group being considered here (18–30 years) there are social as well as economic factors that would affect this distinction. The most obvious of these are education and the cost of setting up a home. Young Australians are leaving home at increasing ages partly due to increasing periods in education (Evans 2013; de Vaus 2004). This means that there is a longer period of time where LAT relationships are the most convenient. The cost of setting up a home and the low availability of rental properties in some areas of Australia could also influence young couple's decisions to live apart. It is increasingly difficult for young people with lower and often part-time incomes to access the rental housing market.

This section will consider the frequency of LAT contact, cohabiting intentions, and transition to cohabitation for LATs aged 18–30. The data are again drawn

from HILDA, specifically the 2005 and 2008 waves which contained questions about 'intimate and ongoing' relationships where the partners were not living together. For the data presented below a pooled sample of respondents in 2005 and 2008 is used to increase the number of respondents and increase the reliability of the patterns discovered. It has already been established that LATs are a significant relationship choice for young people, particularly up to age 23. Around 30 % of 18–20 year olds and 25 % of those aged 21–23 report being in a LAT relationship, dropping to a constant 10 % by the late 20s (Fig. 2.3).

2.5.1 How Often Do LAT Partners See Each Other?

LAT respondents were asked how often they saw their partners. In the two younger age groups, <20 and 20–24, 80 % of respondents saw their partners more than three times per week (Fig. 2.5). For those in the normative tertiary education age group (18–22), there is a greater tendency to meet almost every day. At this age there is a high level of homogeneity in the activities of young people, with partners moving and socialising in the same circles. It would be common for both partners to be in education and attending the same educational institutions. These factors make frequent contact relatively easy in the course of normal daily activities. As people get older and move into full-time working ages there is greater heterogeneity in their day-to-day lives. This is evident in the decrease in daily contact and the concurrent
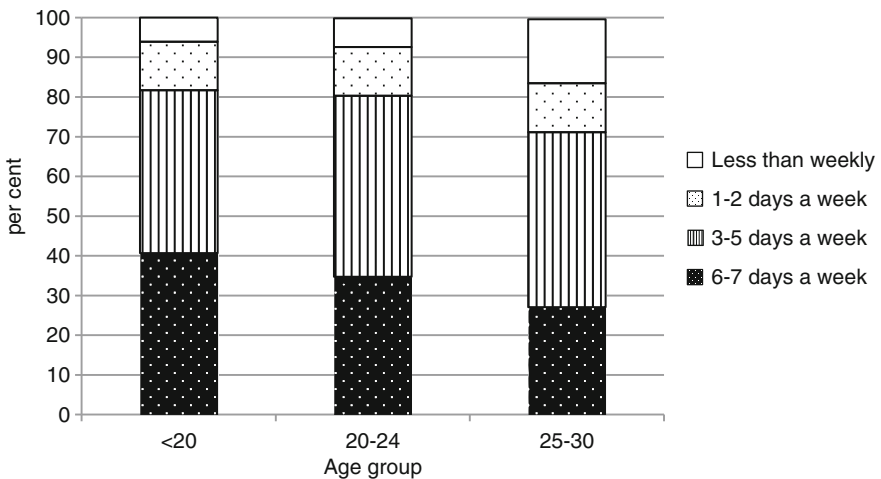
Fig. 2.5 Frequency of meeting LAT partner by age group

increase in less-than-weekly contact between partners. The category '3–5 days a week' still remains the most common and 70 % see their partners more than 3 days per week.

2.5.2   Do LAT Partners Intend to Live Together in the Future?

The high level of contact between LAT partners does not reveal much about the seriousness of the relationship, how committed the partners are to each other, or how they see the future of the relationship. A better measure of whether couples are in LATs as an alternative to cohabitation is to ask about what plans individuals have for the future of their relationship. If LATs were considered as alternatives to live-in relationships we would expect there to be few people with plans to cohabit. This can also be a measure of the seriousness of the relationship. LATs are a part of the process of relationship formation and so for serious relationships it may be expected that people would be thinking about moving in together.

HILDA asked about the intentions of individuals in LAT relationships to cohabit with their current partners within the next 3 years. There was a steady increase across age groups: as people get older they are more likely to indicate that they intend to live together in the next 3 years (Fig. 2.6). A very high proportion (63 %) of those aged less than 20 indicated that they intended to live together over the next 3 years. This figure rose to 77 % for the 25–30 year olds. There is an element of social desirability in responses to this type of question (Lavrakas 2008) and it might be assumed that this is an overestimate of firm plans. Further, it is impossible to ascertain what the
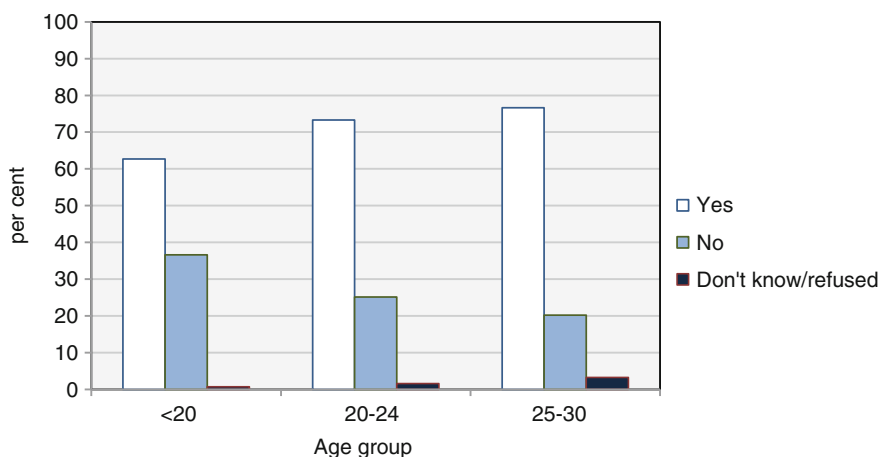
Fig. 2.6 LAT partners, intention to cohabit in the next 3 years by age group

other individual in the partnership thinks, and whether he or she has similar or
dissimilar intentions.

2.5.3 Do LAT Partners Actually Move in Together?

Due to the way the data are collected it is not possible to determine if these intentions
are realised. It is possible, however, to see if a respondent's relationship status changed
from 'single' to cohabiting or married in the year following the year he or she recorded
being in a LAT relationship. In the wave that LAT status was recorded (2005 or 2008)
the relationship status would have been recorded as single. HILDA provides the oppor-
tunity to look at the relationship status in the year following the LAT being recorded
(2006 or 2009) to see if the respondent is still 'single' (maybe in a LAT relationship but
maybe not – this cannot be determined) or if he or she is subsequently married or
cohabiting. An assumption does need to be made that this marriage or cohabitation is
with the same person as the LAT relationship in the previous year, as this is not mea-
sured. In a high proportion of cases this is probably true. If this assumption is held it is
possible to estimate the proportion that move in with an LAT partner.

Figure 2.7 displays the distribution of relationship status in the year following the
LAT relationship being recorded. At each age group the majority of these individuals
are still 'single'. In this case 'single' refers to all of those who are not in any
relationship, those in a LAT relationship with the same person as the year before and
those in a LAT relationship with a new partner. It is impossible to separate these
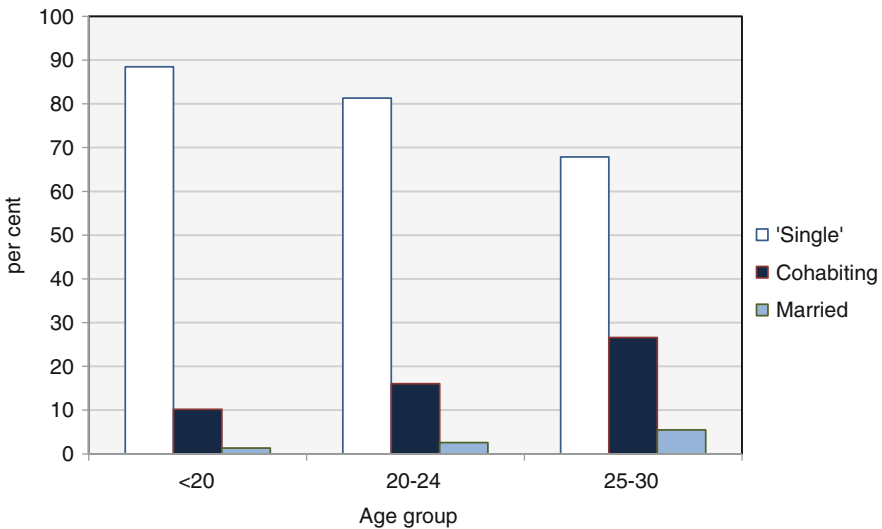
Fig. 2.7 Relationship status 1 year after LAT identified, by age group

groups using these data. While in the majority, the proportion 'single' does decrease with age. Increasing with age is the proportion cohabiting or married 1 year after recording an LAT.

At the youngest age (<20 years), 12 % of LAT partners are in a live-in relationship 1 year later. For those aged 20–24 this figure is 19 % and 32 % for the 25–30 age group. It can be assumed that a reasonably high proportion of these relationships are with the same person as the LAT relationships recorded in the previous year. There is some lead time required for most relationships to progress to sharing a residence. A person would have to break up with an LAT partner, find someone else, enter a LAT relationship with that person and then move in with the new partner in less than 12 months for the live-in relationship to be with a different person from the LAT relationship. This is by no means beyond the realm of the possible, especially among the younger age groups, but would likely occur in a minority of cases.

So are LAT relationships a stage in the relationship formation process or being used as an alternative to cohabitation? For this age group (18–30 years) it is mostly the former. While half of respondents indicate that they have made a definite decision to live apart (analysis not shown), this is most likely related to their educational, financial and employment positions than a decision based on the relationship itself.

2.6 Discussion

This chapter sought to illuminate the factors that might affect the choice of a first live-in relationship type. It uses prospective panel data from a nationally representative source.

There is a strong age norm around live-in relationships. Living together in a cohabiting relationship is seen as very important between ages 30 and 35. When asked about the present, the importance young people placed on cohabitation increased with age. However, when asked about the future, young people across all age groups considered cohabitation by age 35 to be very important. There is an expectation that by the early 30s being in a cohabiting relationship will be a high priority.

During the 20s, other things are more important than living together. One of these is education. Changes in the labour market leading to the prolongation of education have affected the timing of relationship formation, leading to a delay in the onset of the first live-in relationship (Evans 2013). Analysis of relationship formation behaviour almost exclusively focuses on the live-in relationship. But this chapter shows that this delay has not led to a larger proportion of single people. This delay has instead led to widespread uptake of LAT relationships in the early 20s. These LATs are considered serious by the respondents who indicate a high level of intention to cohabit with their LAT partner in the future.

As education is prolonged, the timing of first live-in union is pushed later into the 20s. Cohabitation serves to provide a safe environment for young people to live

together and be sexually active as if married, without the ties of marriage. This further delays marriage for most people who have one or more cohabitations prior to first marriage. Young people aged less than 30 place little importance on marriage in their present lives. They do, however, see marriage as having high importance in the future.

The inverted u-shaped pattern of relationship status by education found in this chapter mirrors that described by Heard (2011) in her analysis of Australian census data. Heard finds that, below the age of 30, cohabitation is most common among those with vocational qualifications. Those on the lower and upper ends of the educational spectrum have lower rates of cohabitation. This research finds that, for first live-in relationship, a similar pattern exists. Comparing direct marriage and cohabitation, those on the upper and lower ends of the educational spectrum are more likely to directly marry, while those in the middle are more likely to choose to cohabit.

This chapter also measured whether the importance of religion (as self-reported) was useful in determining relationship choices. As Australia becomes increasingly secular, this research finds that there is a direct positive relationship between the importance of religion in a person's life and their decision to cohabit or directly marry. Direct marriage is much more likely when a person indicates that religion is important or very important, while cohabitation is much more likely when religion is considered not important.

This research finds that family background plays an important role in shaping choices around first relationship type. Direct marriage is most likely to occur when young people are from families where one or both parents are born in a non-English speaking country, when the parents have never divorced and where the father has a post-secondary qualification. The impact of family is interesting in this context as it is the setting for a lifetime of relationship modelling. Most young people in this study would have lived with married (not cohabiting) parents, and have not necessarily observed the differences or similarities between couples who cohabit or couples who marry. They have however experienced a high level of parental divorce and this may be crucial in shaping their own attitudes to marriage.

Direct marriage has become increasingly rare as more couples choose to try out their relationship first by cohabiting for a period before marriage. Many experience more than one cohabitation before selecting a partner for marriage. Through this process direct marriage has also become more selective with cohabitation becoming normative and direct marriage occurring at the extremes.

What is the future of LAT relationships and cohabitation among young adults in Australia? LAT relationships for those under 21 will undoubtedly continue along the same lines for many years to come. This is the age at which dating relationships are common. The impact of education and economic factors, such as employment and housing costs, may lengthen the period of 'dating' before the first live-in relationship. However, there are probably limits to this prolongation, and these may have already been reached. There is evidence in 2011 and 2012 of a slight drop in the proportion of marriages being preceded by cohabitation (ABS 2013). There is also a very slight increase in the rate of marriage among people aged in their 20s; however, the median

age at marriage remains constant. Continued monitoring of these trends is necessary in order to pinpoint the potential limits to the spread of cohabitation and the delay in co-residential relationship formation in Australia.

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Chapter 3
Marriage

Janeen Baxter, Belinda Hewitt, and Judy Rose

3.1 Introduction

In the past few decades, marriage patterns have undergone significant change. Along with most Western nations, Australia has witnessed a decline in marriage, an increase in divorce, and a growth in the number of couples choosing to cohabit prior to, or instead of, marriage. In the mid-1970s, just 16 % of couples lived together before marrying. Now, more than three-quarters of couples do so. Same-sex marriage is commonly debated, and most states in Australia recognize same-sex relationships as a legitimate form of intimate partnering. Marriage is no longer considered an essential foundation for raising children with growing numbers of people raising children outside marriage, either as single parents or in cohabiting relationships. Despite these substantial social shifts however, marriage remains an aspiration for many young Australians and most marry at some point in their lives (Qu and Soriano 2004). This chapter describes changing patterns of marriage, the explanations for these changes and the reasons why marriage continues to be an important aspiration and life course event for most people.

The chapter commences by describing trends in the marriage rate in Australia over several decades using data from the Australian Bureau of Statistics, providing international comparisons where appropriate. We then review theoretical perspectives concerned with explaining change in marriage patterns and trends that provide insights into the reasons why most still aspire to marriage. Data from the

J. Baxter (✉)
Institute for Social Science Research, University of Queensland, Brisbane, QLD, Australia
e-mail: j.baxter@uq.edu.au

B. Hewitt • J. Rose
School of Social Science and Institute for Social Science Research, University of Queensland, Brisbane, QLD, Australia

Household, Income and Labour Dynamics in Australia (HILDA) survey are used to investigate who gets married in Australian, while in-depth interviews with men and women from a smaller study investigate the meaning of marriage in people's lives. We conclude the chapter with a discussion of possible future developments and implications.

3.2 Changing Marriage Trends

Since the 1900s marriage rates in Australia have fluctuated in response to social and economic conditions and to change in the age structure over time. Figure 3.1 shows that the crude marriage rate (the number of marriages registered each year per 1,000 head of population) has steadily decreased over the time period between 1860 and 2011 (ABS 2011). A pronounced dip in the marriage rate occurred in the 1930s at the time of the Depression. In contrast, notable increases are evident following the two world wars. The postwar era between 1940 and 1970 featured a marriage boom attributed largely to the thriving economic conditions after World War II (de Vaus et al. 2003). Another decline in the crude marriage rate occurred after the 1970s as social attitudes to marriage and cohabitation started to change. These changes occurred as married women's labour market participation rates increased and as women gained easier access to contraception. Greater financial and contraceptive control meant that marrying at a young age became less necessary than in the past (De Vaus 2004). From the mid 1970s onwards marriage became increasingly optional rather than the marker of adulthood that it once was (De Vaus 2004). In the 1990s the crude marriage rate dipped to a record low, but since 2000 the crude marriage rate has stabilized at about five to six marriages per 1,000 population. This suggests that despite the decline in marriage rates over time, marriage remains relatively popular with Australians in recent times, with the proportion of 'ever married' people at 70 % for the 30–35 year range (ABS 2011). As Heard (2012) has
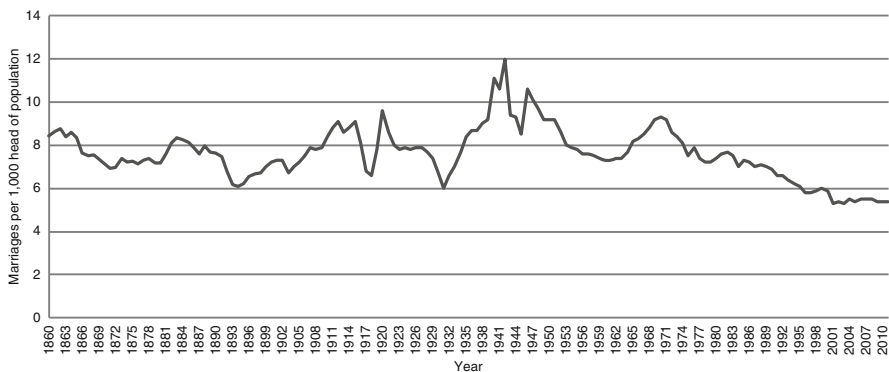
Fig. 3.1 Crude marriage rate, Australia 1860–2011 (ABS 2008, 2011)
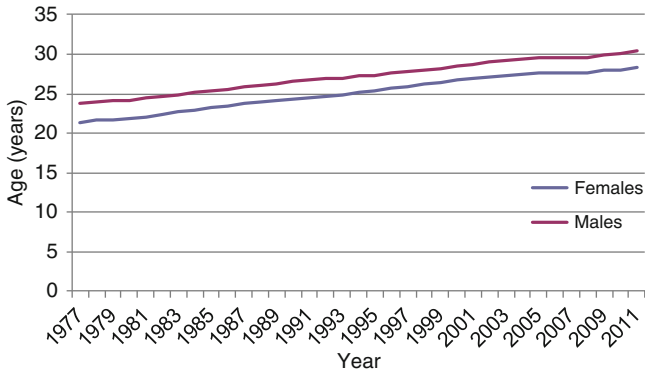
Fig. 3.2 Median age at first marriage, Australia 1977–2011 (ABS, various years)

argued, these figures show that marriage remains a relevant milestone to many Australians at some stage in their lives.

Figure 3.2 shows that the median age of first marriage has increased over time, with the most notable rise in marriage age occurring after the mid-1970s (ABS 2008). In 1975 the median marriage age was 21 years for women and 23 years for men (ABS 2007). By 2010, the median age at first marriage increased to 28 years for women and 30 years for men (ABS 2012a). This pattern is related to a number of factors including young adults investing more time in higher education and an associated delay in entering the labour market, young people taking longer to leave the family home, and the increased social acceptance of cohabitation (Evans and Baxter 2013).

Increased social acceptance of cohabitation in Australia has meant that couples today often live together before marriage (Chap. 2). In 2011, 78.2 % of Australian couples who married had cohabited prior to marriage, compared to only 15 % in 1975 (Hewitt and Baxter 2011; ABS 2011). This suggests that cohabitation before marriage has become the norm, although the reasons people cohabit, and pathways into and out of cohabitation may vary (Buchler et al. 2009).

A growing proportion of children are born in cohabiting relationships with 16 % of children born to cohabiting couples in 2000 (de Vaus 2004). However, 64 % of cohabiting couples with children aged 0–2 years reported in the 2001 HILDA survey that they had strong intentions to marry their partner (De Vaus 2004). The birth of children provides cohabiting couples with a reason to marry, but suggests that the order of family formation events is changing. The composition of families is also changing, with increasing numbers of people re-partnering and creating blended families.

The way in which couples legalise and celebrate their marriage has become less traditional than in the past with more couples choosing non-religious marriage ceremonies over religious ones (ABS 2012a). In 2011, 70 % of all marriages were
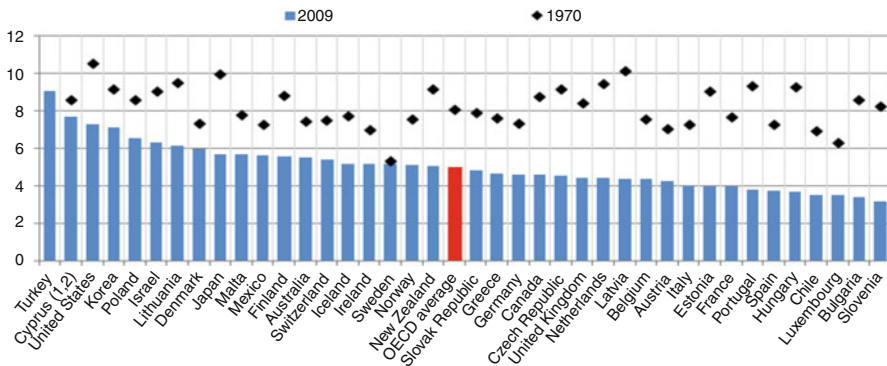
Fig. 3.3 Crude marriage rates, OECD, 1970 and 2009 (OECD Family Database 2012; Eurostat 2012; United Nations Statistical Division 2011)

performed by civil celebrants. Trends show that couples who cohabit before marriage are more likely to have a civil celebrant perform their marriage ceremony (76.6 %) than couples who marry without living together first (46.6 %) (ABS 2011). This suggests that couples with more traditional values are also less likely to cohabit and more likely to marry in a religious setting.

3.3 International Marriage Comparisons

How do marriage patterns and trends in Australia compare internationally? Figure 3.3 provides a snapshot of the crude marriage rate across OECD nations, and shows marriage rates in 1970 and 2009 (Eurostat 2012). The data indicate that the United States had one of the highest rates of marriage in 2009 with approximately seven marriages per 1,000 population. Countries with low rates in 2009 include the Netherlands with a rate of just over four marriages per 1,000 population and Spain with a rate just below four. In 2009 Australia was positioned just above the OECD average of around five marriages per 1,000 population.

3.4 Theoretical Explanations

One of the puzzling questions arising from the trends outlined above is why marriage remains as popular as it is. Given the rapid rise and increasing acceptance of cohabitation as a legitimate form of partnership, why do most people in Australia, and indeed in all of the OECD countries considered above, still decide to marry rather than continuing to live in cohabiting relationships? Cohabitation provides many of the same legal and social rights as marriage, and studies have

shown little differences between married and cohabiting couples in terms of wellbeing outcomes and relationship quality (Horwitz and White 1998; Soons and Kalmijn 2009). At the same time, the move from cohabitation to marriage has been shown to be associated with a decline in relationship quality and levels of satisfaction, and for women there is evidence that marriage is associated with poorer outcomes in terms of earnings, participation in paid work and the gendered division of labour at home, compared to cohabitation (Gupta 1999; Baxter et al. 2008). Coontz (2004) has suggested that one of the unique features of contemporary societies is the wide array of choice about forms of intimate partnership. Even though same sex relationships, cohabiting relationships and other forms of non-marital partnerships have existed across many historical periods, what differs today is the legitimacy and acceptance of all of these forms at the same time. So why do individuals still tend to see marriage as the ideal?

Some explanations may be found in large-scale macro level theories about changing forms of intimacy, the meaning of personal ties and the nature of relationships. These theories often draw on narratives relating to broad social, cultural, economic and ideational changes including theories of individualization, globalization and modernity (Giddens 1992; Beck and Beck-Gernsheim 1995; Bauman 2000). Giddens (1992) suggests that late modernity has seen a revolution in what people expect from marriage and from relationships more broadly. He argues that people are looking for a 'pure relationship' that is satisfying and emotionally intimate. This means the quest for the right person to form a lifelong partnership with, or the ideal soul mate, has become more important than in previous times. Others argue that increasing individualism has led to the discarding of traditions and rules that once governed relationships, to be replaced by a "normal chaos of love" where, in a world of uncertainty and chaos, romantic love is the only way that people can connect with one another (Beck and Beck-Gernsheim 1995). This suggests that each individual must now design and live his or her own personal biography, navigating complex and often contradictory life options. These new meanings suggest that relationships are inherently more unstable than in the past, as people are more likely to separate or divorce if their marriages fail to provide personal satisfaction or if romantic love is not sustained over time. Bauman's (2000) notion of 'liquid love' is a more fluid view of personal relationships in late modernity, suggesting that relationship ties are no longer solid or fixed and can be more easily cut than in the past. While these broad theories provide useful heuristic frameworks they do not explain individual level decisions about partnering made within specific societal, cultural and temporal contexts. Further, such theories do as much to explain why people choose to serially cohabit as they do to explain why most people still choose to marry.

Economic rationalist and gender specialization theories argue that to attain maximum household utility it is rational for spouses in married couples to specialize in paid work (typically the husband) and in unpaid labour (typically the wife) (Becker 1973). According to Becker's argument, men have a comparative advantage in the labour market due to their higher earning capacity or human capital and women have a comparative advantage at home because of their biology (Becker 1973).

Therefore it is rational for individuals to marry in order to maximize specialization gains. This argument has lost some relevance in recent decades as women have invested in higher education and increased their earning potential and human capital, and are more likely to maintain an attachment to the workforce while having children (Brynin and Ermisch 2009). In addition, contemporary women's greater access to economic resources and financial independence afford greater levels of choice in regards to whether to marry and when to marry than was the case for women in earlier generations (Qu and Soriano 2004).

Cherlin's (2004) theory of the deinstitutionalization of marriage and the increasing importance of marriage as a capstone to other life achievements offers one possible explanation of the current place of marriage in some societies. Cherlin argues that many of the norms that once guided marriage have been weakened or lost as societies become increasingly secular and legal institutions recognize a diversity of family types, a process he refers to as the "deinstitutionalization" of marriage. He points to the rise of cohabitation, increasing childbearing outside of marriage, changing gender divisions of labour and the emergence of same sex marriages as trends that all signal the changing meaning of contemporary marriage. And he suggests that changes in the meaning of marriage are not new. Historically we have witnessed the decline of the "institutional" marriage in favour of the "companionate" marriage in the 1940s and 1950s, characterized by a traditional gendered division of labour, but with ideals of companionship and love as the basis of the partnership. Starting in the late 1960s and throughout the 1970s the ideal of the companionate marriage gave way to individualized marriages characterized by self-development, flexible roles and open communication.

Cherlin argues that we are currently witnessing another transformation characterized by a greater range of choices about how to live one's personal life, but also by a change in expectations of marriage. This does not mean that marriage has no meaning or no place in the current context. On the contrary, although marriage may have lost much of its practical significance as the only legitimate form of adult intimate relationship and the only appropriate form in which to bear and raise children, it has taken on a new symbolic status. Marriage is now something to be celebrated and achieved as a 'capstone', often after other goals, such as completing higher education and establishing a career or steady employment, have been achieved. Marriage has thus shifted from being one early marker of adulthood to a prestige status that is a capstone of adult life.

One of the consequences of this change is that the timing of marriage in the life course for both men and women is shifted until after other events and transitions, including completing education, finding secure employment, accumulating savings, acquiring a house or apartment to rent or purchase, living together and in some cases, having children. The implications are that some groups, such as higher socio-economic groups, may be able to move smoothly toward their marriage goals, while others, such as lower socio-economic groups or those who encounter hurdles along the way, such as poor health, unemployment or other forms of disadvantage, will take longer to achieve their marriage goals (McLanahan 2004; Edin and Kefalas 2005). Regardless, the shifts in the timing and meaning of marriage mean all groups

will spend longer periods of time living independently of a marital partner. Attitudes about whether to marry and the timing of marriage will vary, and there will be cultural shifts in values and beliefs, particularly pertaining to gender roles and how to effectively balance employment and family. It is also the case that some men and women will never marry, or if they do, may increasingly divorce if the capstone does not live up to ideals.

3.5 Who Gets Married? – Evidence from HILDA

While it is difficult to empirically operationalize the theoretical arguments outlined above, it is possible to investigate the characteristics of individuals who marry and to draw some conclusions about why some people marry and the timing of marriage. In this section of the chapter we examine the question of who gets married in Australia using longitudinal data from the first six waves of HILDA. We draw on earlier analyses presented in Hewitt and Baxter (2011). A description of the data, analytic sample, measures and analysis can be found in Appendix 3.1. We provide a table of descriptive statistics for all measures in Appendix 3.2 and the full models for men and women are shown in Appendices 3.3 and 3.4.

Cherlin's argument that marriage is a capstone to other achievements implies that men and women with higher economic resources will be more likely to marry than those with low economic resources. To investigate how socio-economic characteristics are associated with entry to marriage we examine whether women and men with high levels of income and education are more likely to marry. We find that both men and women who have higher incomes have a higher likelihood of getting married (data not shown). In addition we find that women's education is associated with a transition into marriage (although this result is not statistically significant) and men with higher levels of education are significantly more likely to get married (Fig. 3.4).
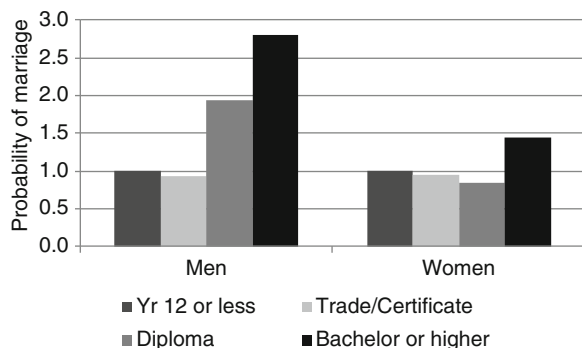
Fig. 3.4 Education and the probability of marriage for men and women (HILDA waves 1–6, see Hewitt and Baxter 2011)

Fig. 3.5 Predicted odds of marriage for women earning $AUD40,000 relative to $AUD20,000 per year, by age (HILDA waves 1–6, see Hewitt and Baxter 2011)
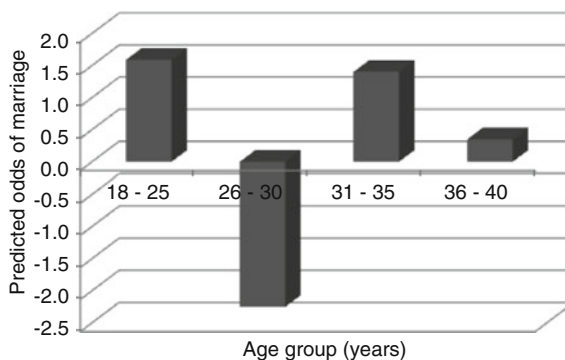
As noted earlier, both men and women are delaying marriage, but ABS data do not indicate if age at marriage varies according to other characteristics. If marriage is increasingly defined as a capstone event, those who complete education and achieve financial security may be more likely to marry earlier than those who do not achieve these milestones. In other words, age may be important in determining entry to marriage only because men and women are spending longer periods of time achieving other objectives prior to entering marriage.

To investigate if there are age differences in the likelihood of marrying depending on income, employment status and education, we examine age interactions with these variables. We find that women in the prime marriage years of 26–30 and earning higher incomes are less likely to marry than their younger counterparts earning similar amounts (Fig. 3.5). This suggests that having access to alternative means of financial support deters women in this age group from entering marriage. But it is unclear why economic independence would only be a deterrent for this age group relative to the younger age group. At face value this finding is not consistent with a 'marriage as capstone' hypothesis, which would predict that higher income would improve the chances of marriage in this group relative to the youngest age group. However, it is plausible that high earning women in this group will delay marriage in order to secure well-paying jobs and career advancement, but once they reach their early thirties may feel that opportunities for establishing a long-term relationship and having children are declining and decide to marry.

For men we see a different pattern (see Fig. 3.6). Here the odds of marriage for young men aged 18–25 who are high earners are significantly higher than for older men (aged 31–35 years) who are high earners. It is relatively rare that young men have high earnings and in other analyses (not shown) we find that their average earnings are around half that of men in the older age groups. Hence, for this rather unique and small group of young, high earning men, marriage prospects are high.

Not surprisingly, research indicates that those who hold more traditional gender role views, or are more religious and family orientated, will be more likely to marry (Sassler and Schoen 1999; Carlson et al. 2004; Waite and Lehrer 2003). Conversely, more egalitarian women who view marriage as a patriarchal institution

Fig. 3.6 Predicted odds of marriage for men earning $AUD80,000 relative to $AUD40,000 per year, by age (HILDA waves 1–6, see Hewitt and Baxter 2011)
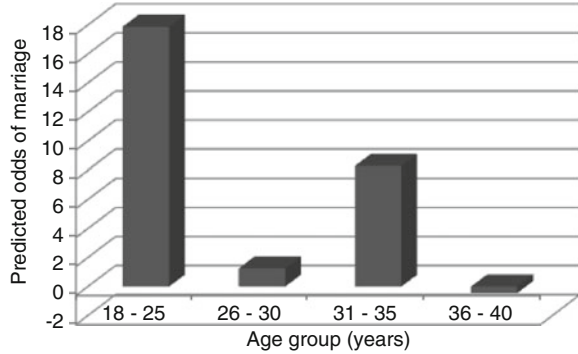
Fig. 3.7 Importance of family to marriage probability for men and women (HILDA waves 1–6, see Hewitt and Baxter 2011)
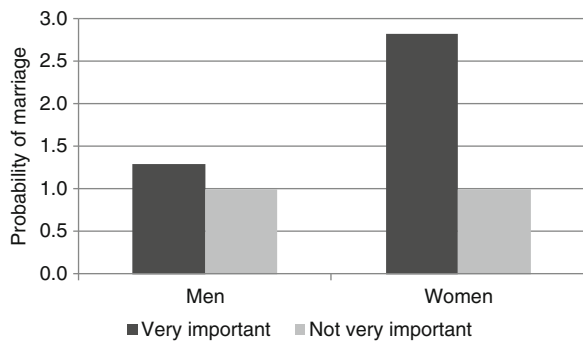
may be discouraged from marrying (Carlson et al. 2004; Sassler and Schoen 1999). Consistent with this view, empirical research has shown that the decision to marry is not only related to economic opportunities, but attitudinal factors (Sassler and Schoen 1999). On the other hand, cultural associations of marriage with patriarchal authority may discourage women with stronger work force attachment from marrying (Sassler and Schoen 1999; Carlson et al. 2004). Finally, most religions uphold the sanctity of marriage and therefore those who are more religious are more likely to marry (Waite and Lehrer 2003; Carlson et al. 2004).

As shown in Fig. 3.7, women who rate family as very important in their lives are more likely to marry. But we find no association between attitudes to gender roles and the likelihood of marriage for women (data not shown). For men we find no association between men's attitudes to gender roles (data not shown) or the importance of family and the likelihood of marriage. Both men and women who state that religion is important in their lives are significantly more likely to marry, as shown in Fig. 3.8.

Overall, the relatively weak and non-significant associations of our attitudinal measures with marriage transitions are consistent with arguments that the normative foundations of marriage have diversified and have been undermined (Giddens 1992; Beck-Gernsheim 2002; Cherlin 2004).

Fig. 3.8 Importance of religion on marriage probability for men and women (HILDA waves 1–6, see Hewitt and Baxter 2011)
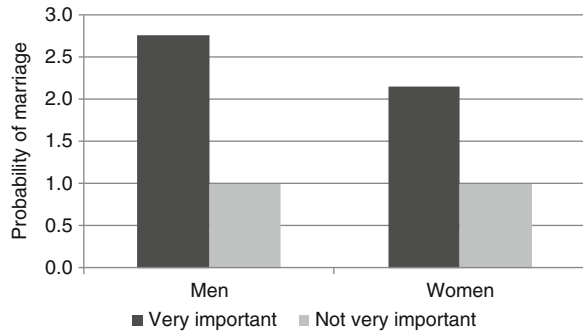
3.6 The Meaning of Marriage

Quantitative data from large-scale surveys such as HILDA provide important insights into the timing of marriage and the variables associated with entry to marriage. But this is only part of the story. In order to further explore the meaning of marriage we conducted semi-structured interviews with Australian men and women in early 2012 to explore how individuals talked about marriage in their lives and the meanings they associated with marriage and personal relationships. We identified our respondents using the 2009 'Negotiating the Lifecourse' (NLC) survey sample (see Evans and Baxter 2013). We purposively selected individuals in a range of relationship arrangements and with a range of relationship histories and were successful in contacting and re-interviewing 49 participants between February and March 2012. The interviews were conducted by the authors and a female doctoral student employed as a research assistant. They were all transcribed and each of the interviewers wrote additional case notes about the context of the interview, their impressions of the respondent's reactions to the topics and other information that might help to interpret the material. The data were thematically coded and analyzed using NVivo 9 qualitative data analysis software. The thematic coding process is based on Strauss and Corbin's (1990) grounded theory which identifies broad themes emerging from the data, and then further refines key findings relevant to the meaning of marriage into a thematic node and sub-node structure. Appendix 3.3 includes a table of the thematic code structure and count.

The sample included 29 women and 20 men aged between 25 and 70 years. The majority lived in Melbourne or Brisbane with the remainder in regional locations near these cities. While the sample is not intended to be representative, we used the background details provided through the NLC databases and our interviews to build a rich understanding of the relationship histories and meaning of marriage in the lives of each of these respondents. Many of the respondents had transitioned through a number of relationship states across their life course including cohabitation, marriage, separation and divorce. At the time of the interviews, 51 % of the respondents were married, 13 % cohabiting, 18 % single (never married) and 10 % were single (previously married). A small proportion (8 %) was in LAT (Living Apart Together)

relationships (see Chap. 2). The topics covered in the interviews included personal and family background, relationship history, and attitudes towards marriage and relationships.

The overwhelming theme emerging from many of the interviews was the notion of marriage as a public ritual indicating security and stability in contrast to more tenuous relationships. The association of marriage with commitment, security and stability was evident across all age groups, but was particularly strong amongst the younger age groups. Amalie, a 28-year-old woman, cohabiting and engaged to be married, felt the idea of a public commitment was important to marriage:

> I think it still is seen as being – generally like being more secure in the relationship if you are married. I think there's still that perception that if you're not married… even though you might be really *committed* in your relationship…to the outside world it seems like well you could just leave at any time.

Jacob, a 30-year-old man, single and never married, regarded marriage as a lifelong commitment to one partner:

> To the people, say my parents' age or my grandparents, it was basically 'till death do us part', no matter what… and to me, when I get married, it'll be 'till death do us part' as well. It's because you make that *commitment* to the other person and you might as well keep it…. Even though changing partners sounds great when you're young and beautiful and everything else, as you get older you don't really want to be doing that.

Jacob's view is similar to Amalie's view that marriage means relationship commitment and stability. His point that the marriage commitment – 'till death do us part' suggest it is as relevant today as it was in the past, but for different reasons. Jacob also regarded marriage as a move away from less stable relationships 'when you're young and beautiful' into a more mature commitment to one partner.

Todd, a 31-year-old man, noted that the marriage vow represented a more securely committed relationship where he would be less likely to 'pack up and leave'.

> Even if you had a non-official kind of ceremony it's still not legally binding and you can still just pack up and leave whenever. So in that respect marriage is a bit stronger, tighter… So from that point of view it's – you're more likely to try if you're married. A stronger bond, I guess.

Ellen, a 48-year-old married woman, made a similar point:

> That's why you have marriage, so you sign on the dotted line, you *commit* to things, you put things together. To me if you're just living together you're not doing that. You're not taking it seriously because why – if you're not taking it seriously, you're leaving it open ended so you can move on if you wanted.

Vincent, a 52-year-old married man, suggested that it is the commitment that couples make when they marry that keeps them together in tough times, or when they might feel like leaving the relationship.

> I think, tests in relationships and in the end it's the *commitment* that you make that keeps you there when at times you may not feel like being there.

Keiran, a 59-year-old married man, explains why he feels commitment is important to the marriage bond.

I think that when people are *committed,* and they take a vow to go through sickness and in health, that they will have to work through the hard times to get to the good times, because of the nature of the way people bond.

These data suggest that marriage means commitment, stability and security, including staying together, even when difficulties arise in the relationship. These participants also view marriage as a more durable partnership, than a cohabiting relationship. Emmett, a 64-year-old widower, further suggests that the legal aspect of marriage makes it less likely that the relationship will dissolve. He also echoes other participants' views that de facto relationships are less secure.

I guess maybe the one sort of positive thing I can think of about being formally married, which doesn't have to be a religious thing but a formal signing of the documents, the legal aspect of it. One positive thing could be that when problems arise in a relationship, they're probably less likely to just give it away than perhaps if they're just de facto and haven't signed anything.

For most, the public nature of the marriage ceremony ritual compared to other kinds of intimate partnerships was also central to their views about marriage. Paige, a 52-year-old single and never-married woman, acknowledged the importance of the marriage ritual in a 'post-church' and increasingly secular society.

So there is some symbol in that…But I also think that it's a sign of *commitment* and in this post-church Christian society, whatever, we have very few places of public ritual that we can *commit* to a partner. I think the ritual's important.

Emmett's description of his sister's wedding describes what a typical non-religious ritual looks like, often in picturesque outdoor setting presided by a marriage celebrant.

My sister got married with a lovely marriage celebrant, beautiful ceremony, yes, so there you go, the ritual of the marriage celebrant. In a winery with trees and, so yes, so I think that the sort of the marriage thing, having a ritual is important.

Carl, a 68-year-old married man, echoes the importance of the commitment ritual, and particularly the way it formalizes the relationship in public view:

There's some rituals associated with making a *commitment* in front of an altar, or in front of a registrar or something, and signing a book. I think symbols and rituals are important in formalizing a relationship.

Another aspect of the marriage ritual discussed by participants was the importance of the ceremony being witnessed by a third party, as Vincent explains:

The service and that sort of public *commitment* and affirmation and to see it in a religious sense that you're making a commitment to one another, but it's not just between you, that there is a third, as it were, there to overview, oversee.

Bronte, a 56-year-old woman, married for 33 years, confirms the importance of the broader community in supporting a marriage:

It's a public act and the people who are witnessing your marriage and the people in your community who are there more or less say "well we will support you in this; this is not just a private thing."

Bronte's account points out the importance of public acknowledgement in marriage, suggesting that it is more than a private vow. Darcy, a 68-year-old married

man, agreed that public commitment and recognition were important to marriage, and that commitment added an elusive special element to the partnership.

> I think that public *commitment* and recognition and the responsibilities that go with it I think – it's a bit hard to define but I think it adds something to the relationship.

Nadia, a 36-year-old woman who is cohabiting with her second partner since divorcing her first husband, commented

> It's more of a symbolic thing than a necessity…. People get married for different reasons now I guess. People get married after they've already had children. So it's more just a public declaration of your love for the person and stuff.

Nadia's account aligns with Cherlin's (2004) view of marriage a symbolic capstone to a relationship. Nadia's account also captures the idea of the individualized marriage, whereby people might marry for different reasons and at different stages of their lives, including after having children or after an earlier marriage dissolves.

Participants were asked to comment on the future of marriage, and whether marriage still had relevance in contemporary society. Renee, a 32-year-old married woman, felt that marriage was still important within her peer group.

> In my circle of friends – it's still important, 30 somethings. My two girlfriends are both married, it's very important to them. My sister has been in and out of relationships but it's still something that's important to her and she's still looking for that right person before she *commits*. She still holds marriage – has this ideal that she wants to get married. I think it's still important, in my circle of friends it is anyway.

Some pertinent points that emerge from Renee's account include the notion that marriage is an aspirational ideal among her peers. However Renee highlights how important it is to find the 'right person' to marry. The ideal of finding an ideal soul mate ties in with Giddens' (1992) view of the 'pure relationship'.

When asked 'why do you think people still get married today?' Shannon, a 25-year-old married woman, reflected:

> I think there's lot of reasons. I think they do get married because they're in love and they want to *commit* their lives to each other and make a *commitment* in front of all their family and friends.

Shannon was one of the few participants in this study who foregrounded romantic love as being the most important element of marriage. While romantic love may play a part in choosing partners to marry, it seems that commitment is what people feel is the key basis for marriage. Commitment appears to trump love in the meaning that marriage holds for people in this sample. Furthermore, participants feel that marriage offers greater stability and security than less formalized relationships.

3.7 Conclusion

Our research points to important areas of change and stability in personal life. Patterns of relationship formation and dissolution have undergone considerable transformation in recent decades and new types of relationships, such as long-term cohabiting unions

and same sex partnerships, are increasingly accepted as appropriate and legitimate forms of intimate unions. In November 2013, for example, Australia's then Governor-General Quentin Bryce publically supported same-sex marriage in a speech delivered on radio as part of the annual Boyer lecture series.

But this does not mean that traditional forms of partnering, such as dating and marriage, are no longer important in contemporary Australian society. As our data show, marriage is idealised by our respondents as an important public affirmation of long-term commitment and stability in a way that cohabitation does not appear to be. Many people aspire to marriage as an important endpoint or capstone, as argued by Cherlin in his important 2004 paper. Our research indicates strong support for the view that marriage has moved its place in the life course from a stepping stone to adulthood to an endpoint after other markers of adulthood have been achieved, such as employment, buying a house and having children. Perhaps what we are witnessing is the re-institutionalization of marriage as a form of commitment and a bond that is not easily broken due to the legal ramifications and perceived difficulties in breaking a marriage tie. In contrast, cohabitation is viewed as a form of commitment that is less secure and more easily ended if needed.

In sum, while marriage rates are declining, there is no evidence that it is disappearing. In contrast the evidence suggests that pathways to marriage, the timing of marriage, and the definition of marriage are diversifying. It is likely that these changes will strengthen rather than weaken marriage. Although we are likely to see continuing fluctuations in the rate of marriage in relation to economic cycles, our view is that marriage will continue to be an important life course event for most people, including increasingly same sex couples. Policy changes that legalise same sex marriage will increase the rate of marriage by making it available to groups who have been historically excluded. The likely result is a strengthening of the importance of marriage as a significant life course marker.

Appendix 3.1: HILDA Data and Measures

The Data

HILDA provides excellent data for our purposes (see Technical Appendix). In the current study we focus on all participants who were never married, or were currently cohabiting but never married at Wave 1 (2,098 men and 1,881 women) and follow them through to wave 6, collected in 2006, to examine the characteristics of those who transitioned into their *first* marriage. We further restrict our sample to those aged between 18 and 40, excluding 343 men and 258 women, and those who had responded to the attitudinal measures, excluding a further 476 men and 377 women. The final analytic samples comprise 1,279 men with an average of 4.5 wave observations and 1,246 women with an average of 4.6 wave observations.

Measures and Covariates

The dependent variable indicates whether or not a respondent married after wave 1 and before wave 6. This is scored 1 if the respondent married between waves 2 and 6, and scored 0 if they did not. In our final analytic sample we observe a total of 444 transitions into marriage by 205 men and 239 women. It should be noted that while cohabitation is not the primary subject of interest, it remains the main pathway into marriage and people who are cohabiting have a much greater likelihood of getting married than those living alone (de Vaus 2004). To help account for this we include a dummy variable for whether or not the respondent was cohabiting (1 = yes), with a referent of not cohabiting (single). This measure is time varying and if the respondent transitions from single into cohabitation they are given a score of 1. It is also lagged by 1 year and therefore indicates the probability of getting married given that a respondent was cohabiting in the previous year.

Age of respondent is categorized into groups: 18–25 years (reference); 25–30 years, 31–35 years, and 36–40 years. We also include a measure indicating whether or not the respondent has a child under the age of 5 in the household. Our final control is for ethnic background and is coded 1 = Australia-born, 2 = Migrant – English speaking country and 3 = Migrant – non-English speaking country.

We include highest level of education, which is scored: 1 = Year 12 or less (reference); 2 = TAFE/Certificate; 3 = Diploma; and 4 = Bachelor degree or higher. We also include a measure for employment status, indicating 1 = employed full time (reference), 2 = employed part time and 3 = not in the labour force. Due to the age range of the sample many people who were employed part time, or not in the labour force, were studying. We therefore include a dummy control for full time study (1 = yes). We also include a continuous measure of respondents' annual individual income from wages and salary; for inclusion in the models this is scaled to $10,000 (i.e. income/10,000). Finally, we have a measure of home ownership which indicates 1 = buying or owns home (reference), 2 = renting, 3 = other (i.e. living rent free/ life tenure).

We include five measures capturing different normative attitudes towards work and family that might influence the decision to marry. The first measure indicates the importance of family (1 = very important). The original variable was measured on a scale from 1 (not important at all) to 10 (the most important thing), but in preliminary analysis the average score for men was 9.13 and for women 9.5, so we dichotomised this measure to indicate those who rated the importance of family between 8 and 10 (1 = yes), relative to the rest. This measure was only asked in Wave 1 and these responses were used for all 6 waves. The next two measures capture attitudes towards the gendered division of paid and unpaid household labour in households. Respondents were asked to indicate their level of agreement with the statement "It is much better for everyone involved if the man earns the money and the woman takes care of the home and children" and "If both partners in a couple work, they should share equally in the housework and care of children". Responses

to both questions ranged from 1 (strongly disagree) to 7 (strongly agree). The questions were asked in Waves 1 and 5. Responses from Wave 1 were used for Waves 1–4 and responses from Wave 5 were used for Waves 5 and 6. We also include a measure for the importance of a respondent's employment and work situation on a scale of 1 (not important at all) to 10 (the most important thing). This question was only asked in Wave 1 and responses are used for Wave 1–6. The final attitudinal measure indicates the importance of religion to the respondent on a scale of 1 (not at all important) to 10 (the most important thing). This was collected in Wave 1 and Wave 4. Responses at Wave 1 were used for Waves 1–3, and responses at Wave 4 were used for Waves 4–6.

For our analysis we use a mixed effect (multilevel) model with a random intercept that takes into account the multiple observations for each respondent using *xtlogit* in STATA (StataCorp 2008). The results are based on a model that includes all measures and interactions between age and the socioeconomic measures. The models are run separately for men and women, however all models are re-estimated on a pooled sample of men and women with gender interactions to test for significant gender differences.

Appendix 3.2: Descriptive Statistics of Model Variables, Pooled Sample, Waves 1–6 HILDA (Hewitt and Baxter 2011)

	Men		Women	
	Mean %[c]	SD	Mean %[c]	SD
Transition to Married (1 = yes)	4		5	
Economic measures				
Education				
Yr 12 or Less	52		49	
TAFE/Cert	22		16	
Diploma	7		8	
Bachelor degree+	19		26	
Employment Status				
Full time	67		44	
Part time	18		32	
Not in labour force	15		24	
Full time study (1 = yes)	14		17	
Earnings	26,868.16	17,706	22,302.27	15,098
Home Ownership				
Own/Buy	51		47	
Rent	46		50	
Other (i.e. rent free)	3		3	
Attitudinal Measures				

	Men		Women	
	Mean %[c]	SD	Mean %[c]	SD
Importance of family (1 = very important)	90		94	
Attitudes to male breadwinner[b]	3.16	1.7	2.53	1.7
Attitudes to sharing housework/childcare[b]	5.64	1.3	6.28	1.11
Importance of employment and work[a]	7.66	2.0	7.31	2.4
Importance of religion[a]	2.45	3.1	3.66	3.4
Controls				
Child under 5 (1 = yes)	6		14	
Cohabiting (lagged 1 = yes)	24		31	
Age cohort of respondent				
<25	51		54	
26–30	22		21	
31–35 (ref)	15		15	
36–40	12		10	
N	1,279		1,746	
Person-years	5,756		5,732	

SD Standard Deviations
[a]0 = not at all important to 10 = the most important thing
[b]1 = strongly disagree to 7 = strongly agree
[c]Mean scores for continuous measures and percentages (%) for categorical variables. SD only reported for continuous measures

Appendix 3.3: Mixed Effect Logit Model of the Odds of Marriage for Men (Hewitt and Baxter 2011)

	Model 1	Model 2	Model 3	Model 4
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Economic measures				
Education				
Yr 12 or Less (reference)	1.00	1.00		1.00
TAFE/Cert	1.04	0.92		0.92
Diploma	2.38[†c]	2.04		1.93
Bachelor degree or higher	3.04[**]	3.07[**]		2.81
Employment Status				
Full time (ref)	1.00	1.00		1.00
Part time	0.27[**]	0.16[*]		0.16[**]
Not in labour force	0.40[*]	0.56		0.52
Full time study (1 = yes)	1.29[c]	1.46		1.40
Earnings (scaled $10,000)	1.16[†]	1.48[*]		1.49[*]

(continued)

	Model 1	Model 2	Model 3	Model 4
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Home Ownership				
Own/Buy (reference)		1.00		1.00
Renting		0.47[**]		0.49[**]
Other (i.e. rent free)		0.29		0.37
Attitudinal Measures				
Importance of family (1 = very important)			1.50	1.30
Attitudes to male breadwinner[b]			1.00	1.05
Attitudes to sharing housework/childcare[b]			1.08	1.10
Importance of employment and work[a]			0.95[c]	0.92
Importance of religion[a]			1.10[**]	1.12[**]
Significant Interactions (Models 2 & 4)				
26–30[*]Earnings		0.70[†]		0.69[*]
36–40[*]Earnings		0.63[†]		0.66[†]
Controls				
Child under 5 (1 = yes)	2.42[*c]	2.24[*c]	1.74[c]	2.00[†]
Cohabiting (lagged 1 = yes)	6.60[***]	6.91[***]	8.07[***]	6.75[***]
Age of respondent				
<25 (reference)	1.00	1.00	1.00	1.00
26–30	3.32[***]	8.73[**]	5.72[***c]	8.56[*]
31–35	2.46[*]	3.81	4.22[***]	3.70[†]
36–40	1.37[c]	4.29	2.39[*c]	3.90
Ethnic Background				
Australia-born (reference)	1.00	1.00	1.00	1.00
Migrant – English speaking	2.18	2.12	2.49[*]	2.14[†]
Migrant – non-English speaking	2.00[†]	2.30[*]	1.55	1.58

SD Standard Deviations

[†]$p < .10$; [*]$p < .05$; [**]$p < .01$; [***]$p < .001$

[a]0 = not at all important to 10 = the most important thing

[b]1 = strongly disagree to 7 = strongly agree

[c]This association for men is significantly different from that for women (Appendix 3.4) at $p < 0.05$

Appendix 3.4: Mixed Effect Logit Model of the Odds of Marriage for Women (Hewitt and Baxter 2011)

	Model 1	Model 2	Model 3	Model 4
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Economic measures				
Education				
Yr 12 or less (reference)	1.00	1.00		1.00
TAFE/Cert	1.02	0.99[c]		0.95
Diploma	0.88[c]	0.80[c]		0.83

(continued)

	Model 1	Model 2	Model 3	Model 4
	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Bachelor degree or higher	1.40	1.36		1.46
Employment status				
Full time (reference)	1.00	1.00		1.00
Part time	0.63[*]	0.60		0.63
Not in labour force	0.59[†]	1.30		1.28
Full time study (1 = yes)	0.37[**c]	0.35[**c]		0.35[**c]
Earnings (scaled $10,000)	1.13	1.36[*]		1.38[*]
Home ownership				
Own/buy (reference)		1.00		1.00
Rent		0.41[***]		0.43[***]
Other (i.e. rent free)		0.17[*]		0.17[*]
Attitudinal measures				
Importance of family (1 = very important)			3.16[*]	2.83[*]
Attitudes to male breadwinner[b]			1.03	1.08
Attitudes to sharing housework/childcare[b]			0.91	0.94
Importance of employment and work[a]			1.08[†c]	1.00
Importance of religion[a]			1.07[**]	1.08[**]
Significant interactions (models 2 & 4)				
26–30[*]Not in the labour force		0.21[**c]		0.21[**c]
31–35[*]Not in the labour force		0.28[†]		0.24[†]
26–30[*]Earnings		0.57[**c]		0.56[**c]
Controls				
Child under 5 (1 = yes)	0.90[c]	0.89[c]	0.71[c]	0.88[c]
Cohabiting (lagged 1 = yes)	7.02[***]	6.78[***]	8.21[***]	7.33[***]
Age of respondent				
<25 (reference)	1.00	1.00	1.00	1.00
26–30	1.72[*]	9.43[***c]	2.47[***c]	10.17[***c]
31–35	1.22	1.41	1.68[†]	1.52
36–40	0.39[*c]	0.14[†c]	0.55[c]	0.13[†c]
Ethnic background				
Australia-born (reference)	1.00	1.00	1.00	1.00
Migrant – English speaking	1.29	1.19	1.43	1.23
Migrant – non-English speaking	1.68	1.66	1.19	1.43

SD Standard Deviations

[†]$p < .10$; [*]$p < .05$; [**]$p < .01$; [***]$p < .001$

[a]0 = not at all important to 10 = the most important thing

[b]1 = strongly disagree to 7 = strongly agree

[c]This association for women is significantly different from that for men (Appendix 3.3) at $p < 0.05$

Appendix 3.5: Qualitative Thematic Analysis

Thematic codes[a]	Sources[b]	References[c]
Commitment (main theme)	20	49
Security/stability (sub- theme)	17	21
Love	9	11
	Total	**81**
Ritual	17	29
Public ritual – religious	9	16
Public ritual – non-religious	8	10
	Total	**26**
Capstone	12	14
Natural progression	6	8
	Total	**22**

[a]NVivo v.9 used to code data
[b]Sources are the number of interviews in which the topic/theme was raised
[c]References are the number of times the topic/theme was raised across all interviews

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Chapter 4
Interethnic Partnering: Patterns by Birthplace, Ancestry and Indigenous Status

Lyndon Walker and Genevieve Heard

4.1 Introduction

Individuals often choose partners with social and cultural backgrounds that are similar to their own. The extent of intermarriage in Australia is an important measure of the social distance between Indigenous and non-Indigenous people, and between those of Anglo-Celtic descent and those of other ethnic backgrounds. Intermarriage may be interpreted as a measure of the successful integration of minority groups or, conversely, as a threat to cultural identity. Either way, increasing intermarriage over time implies the erosion of social boundaries between ethnic groups.

Previous studies have shown that while mid-twentieth century immigrants were often partnered with compatriots, the rate at which their children and grandchildren form exogamous relationships has increased with each generation. Are more recently arrived migrant communities from Asia and the Middle East replicating this pattern? Are the barriers to intermarriage between Indigenous and non-Indigenous Australians eroding at a similar pace?

Using customised data from the 2011 Census, and comparing this with data from earlier censuses, this analysis investigates the extent of intermarriage (both formal and informal) within Australian society according to Indigenous status, country of birth and ancestry. Patterns of intermarriage are examined using percentages and with log-linear models that control for the size of various ethnic groups within the population.

L. Walker (✉)
Faculty of Health, Arts and Design, Swinburne University, Melbourne, Australia
e-mail: lwalker@swin.edu.au

G. Heard
School of Social Sciences, Monash University, Melbourne, Australia
e-mail: genevieve.heard@monash.edu

4.2 Review of the Literature

Characteristics such as birthplace, ancestry and Indigenous status are traditionally strong determinants of partner choice. While many individuals choose to partner with someone of a similar background, others cross ethnic barriers in their choice of a spouse. Intermarriage – defined here as formal or informal (de facto) heterosexual marriage between two people who differ by country of birth, ancestry or Indigenous status – has been a subject of much interest to social scientists.

American research dominates this field, with studies of marriage between the majority white population and one or more ethnic or racial minority groups (Tucker and Mitchell-Kernan 1990; Kalmijn 1993; Hwang et.al. 1997; Crowder and Tolnay 2000; Tzeng 2000; Bratter and Zuberi 2001; Rosenfeld 2008). However, the subject of interethnic partnering is equally salient in the context of Australia, with its large and diverse migration program continually adding to the nation's cultural mix. It is all the more pertinent given the pre-existing divide between Indigenous and non-Indigenous Australians, and the official endorsement of multiculturalism as a cherished feature of Australian society.

4.2.1 Intermarriage as a Measure of Integration or Assimilation

At the most basic level, intermarriage is considered to be the outcome of close social interactions between members of different ethnic groups (Kalmijn and Flap 2001). The extent of partnering across ethnic groups is therefore considered a key indicator of social integration. This view is well expressed by Alba and Nee (2003: 90): 'A high rate of intermarriage signals that the social distance between the groups involved is small and that individuals of putatively different ethnic backgrounds no longer perceive social and cultural differences significant enough to create a barrier to long-term union'.

Historically, there has been significant 'social distance' between Indigenous and non-Indigenous Australians, and between the Australia-born of Anglo-Celtic background and those of other ethnic backgrounds. This has resulted from prejudice within the mainstream community towards 'others', and/or from within minority ethnic or Indigenous communities themselves. Some ethnic groups have traditionally discouraged or proscribed marriage outside the group boundaries – known as 'exogamy', in the language of sociology – and, conversely, have encouraged or prescribed marriage within the group, known as 'endogamy' or 'homogamy'. In Australia, some commentators have expressed concern that multiculturalism may encourage endogamy and thereby perpetuate group boundaries (Blainey 1994).

However, if rates of intermarriage are high or increasing, it implies that concerns about the social segregation of migrant groups in Australian society are unfounded. Similarly, the extent to which Australians are partnering across

Indigenous/non-Indigenous lines is an important indicator of whether past social or cultural divisions between the Indigenous and non-Indigenous communities have dissipated.

Intermarriage across ethnic groups may also mean that these groups are becoming more similar with regard to other social and demographic characteristics. People tend to look for partners with similar educational and class backgrounds to themselves (Kalmijn 1998). Where minority groups are socially or economically disadvantaged relative to the rest of society, exogamy is less likely, since prospective marriage partners are unlikely to bridge this gulf. Conversely, the sociological literature suggests that intermarriage will be relatively high where members of a minority group achieve upward social mobility. Indeed, classic assimilation theory holds that intermarriage occurs only after minority groups achieve equality or near-equality on other dimensions (structural assimilation). Relatively high levels of education, in particular, are often found to facilitate intermarriage (Kalmijn 1993, 1998). This has been verified by past analyses with regard to patterns of intermarriage among Indigenous Australians: rates are high among those who have achieved relatively high levels of education and incomes, even outside the nation's capital cities where exogamy is otherwise low (Heard et al. 2009a).

Intermarriage can be both cause and consequence of upward social mobility for minority group members. There is little doubt that intermarriage can assist minority groups to assimilate with a majority group, or to adopt cultural characteristics of that group (Gevrek et al. 2011). However, the relationship between ethnic intermarriage and ethnic inequality is not unequivocal, depending on the minority group in question and on the characteristics of their 'mainstream' partners (Okun and Khait-Marelly 2010; Song 2010). For example, educational achievement is positively associated with exogamy among US Hispanics, but not US Asians (Gonsoulin and Fu 2010). At the micro level, marriage is an institution in which ethnic differences may be resolved, or it may be an arena in which cultural models compete (Lomskey 2010).

4.2.2   Preferences and Opportunities

Intermarriage is a social phenomenon that is open to several interpretations. It may result from individual preferences for a specific marriage partner, or from structural constraints in the marriage market (Bull 2005: 44). Using log-linear models, scholars have attempted to separate demographic effects from the effects of changing preferences or social norms (Kalmijn 1993; Harris and Ono 2005; Walker 2010; Qian and Lichter 2011). Log-linear models remove the effect of variation in the relative sizes of the different ethnic groups from the analysis of the rates of intermarriage between these groups. This effectively allows a disentangling of opportunity from preference in patterns of spousal choice (Uunk et al. 1996).

Such models confirm that rates of intermarriage are partly determined by opportunity (Blau 1977; Alba and Golden 1986). Intermarriage is less likely the

larger the size of one's own group and, therefore, the availability of potential spouses from that group (Chiswick and Houseworth 2011; Feng et al. 2010). For example, Choi and Mare (2012: 449) show that migrants in the US are more likely than non-migrants to be exogamous, because the relatively small size of their group compels them to expand their pool of potential spouses to include non-migrants.

Despite the importance of opportunity, several recent studies have found that preferences remain the more powerful factor with regard to ethnicity (e.g. Hitsch et al. 2010). Kalmijn and Van Tubergen (2010) reveal large differences in endogamy across 94 ethnic groups in the US, finding that although 'both structural and cultural group-level factors have significant effects on endogamy', 'cultural explanations (which focus on the role of norms and preferences) play a more important role than structural explanations (which focus on meeting and mating opportunities).' Similarly, in Britain, some ethnic groups have higher propensities to form endogamous partnerships, even after controlling for factors such as education and length of residence in the country – yet all are equally responsive to opportunity structures (Muttarak and Heath 2010).

4.2.3   Social Change and Increasing Intermarriage

It is tempting to assume that intermarriage will inevitably increase over time, the longer different ethnic groups live side by side. In western societies, the forces of individualization, secularization and globalization have diminished the influence of parents and of religious institutions over partner choice. Along with the cultural weight given to romantic love, these forces have increased the autonomy of young people in choosing partners and point to ever-increasing opportunities for intermarriage.

Further, intermarriage itself facilitates the erosion of group boundaries by binding families and communities of different ethnic backgrounds together. This can become a recursive process, as partnering choices are shaped by those of the preceding generation. Children of mixed ethnicity couples are less likely to identify as belonging to a single ethnic group, further reducing cultural distinctions (Stephan and Stephan 1989).

Yet change is not necessarily unidirectional. The growth of 'identity politics' (Appiah 2006) or the 'politics of recognition' (Connolly et al. 2007) may imply a greater propensity to take pride in group identity, and a greater interest in the preservation of ethnic subcultures. Any economic or political circumstances which limit social mobility are also likely to perpetuate barriers to intermarriage.

Homogamy has decreased in Britain (Muttarak and Heath 2010). According to Rosenfeld (2008), racial endogamy in the US has also declined sharply over the twentieth century, but race is still the most powerful division in the marriage market.[1]

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[1] Rates of black-white intermarriage in particular remain at levels below other interracial and inter-ethnic unions, despite having increased threefold over the past 30 years (Qian and Lichter 2011).

In both countries, as in Australia, intermarriage is higher among the second generation of migrants than the first (Khoo and Birrell 2002; Muttarak and Heath 2010), and higher still where migrant communities have produced third and subsequent generations (Giorgas and Jones 2002; Alba and Nee 2003; Khoo et al. 2009; Heard et al. 2009b).

Rates of intermarriage between Indigenous and non-Indigenous Australians appear to be high and increasing wherever there are opportunities for mixing: the great majority of partnered Indigenous persons living in Australia's capital cities are exogamous (Heard et al. 2009a). Trends in intermarriage by members of migrant groups are less predictable, because the Australian migration program is characterized by large waves of migrants coming from particular regions of the world at different times. Studies from the US, Britain and Sweden all show that rates of intermarriage can vary widely among different ethnic groups within the same multi-ethnic setting, even accounting for the respective sizes of these populations, and that cultural similarity or dissimilarity plays a significant role (Muttarak and Heath 2010; Kalmijn and Van Tubergen 2010; Dribe and Lundh 2011). Some minority groups may be more resistant to exogamy than others, but the attitudes held by members of the majority ethnic group are also important. US research shows that while Americans have become more accepting of interracial relationships in recent decades (McClain 2011), members of the majority white population are more willing to form relationships with members of some ethnic minorities than others (Herman and Campbell 2012). Thus, though ever-increasing intermarriage appears to have been inevitable for European migrant communities to Australia, the partnering behaviour of more recent waves of migrants from Asia and the Middle East will not necessarily follow the same pattern if their real or perceived cultural distance from the Anglo-Celtic majority is greater (Jones and Luijkx 1996; Giorgas and Jones 2002).

Early work on ethnic intermarriage among first- and second-generation Australians used marriage registration data, which included information on country of birth (Price 1982, 1993; Gray 1987; Jones 1991; Young 1991). However, registration data no longer includes information on the birthplaces of the parents of marriage partners, so that it is now impossible to examine intermarriage patterns among the second generation using this source. Instead, more recent studies of intermarriage in Australia have used birthplace and ancestry data from the quinquennial Australian census (Penny and Khoo 1996; Roy and Hamilton 1997; Giorgas and Jones 2002; Khoo 2004; Khoo et al. 2009). The census provides information on Indigenous status as well as on birthplace and ancestry, enabling a more detailed study of intermarriage across all these sub-group boundaries in Australia (Birrell and Hirst 2002; Heard et al. 2009a).

4.3 Methodology

Using customised data from the 2011 census purchased from the Australian Bureau of Statistics (ABS), this paper assesses the extent of ethnic intermarriage in Australia. Descriptive statistics are the starting point for the examination of

partnership patterns, examining the percentage of marriages both within and between ethnic groups. Where possible, data from previous censuses are used to assess the direction of change in patterns of intermarriage in Australia. The analysis methodology then extends previous Australian research in this field through the use of log-linear models.

The data presented relate to partnered persons only, living in married or de facto relationships with a partner of the opposite sex. There were inevitably some partnered census respondents who did not state their Indigenous status, birthplace or ancestry. Those for whom these characteristics were not stated are excluded from the calculations in the following analysis. However, couples are included in the calculations if one partner stated his or her marital status but the other did not.

The measures of ethnicity used are ancestry, birthplace, and Indigenous status. There are advantages and disadvantages to each measure. Individuals have a single birthplace, whereas they may identify with multiple ancestries. However, ancestry may tell us more about the self-perceived cultural identity of an individual. Although "Australian Aboriginal" is one of the options in the ancestry question in the census, there is also a separate question on Indigenous status, which asks whether the respondent is of Aboriginal and/or Torres Strait origin. We use both variables in our analysis of intermarriage, and compare the results.

The analysis of percentages is extended by examining odds-ratios and log-linear models of the partnership data. Log-linear modelling allows comparisons to be made between the levels of homogamy for groups of different sizes. In particular, the quasi-independence (QI) model provides coefficients that model the number of homogamous partnerships. The cell frequencies m_{ij} of the marriage tables are modelled by:

$$\log m_{ij} = \mu + \lambda_i^{mEth} + \lambda_j^{fEth} + \delta_i I(i = j)$$

where $I(.)$ is the indicator function for the diagonal of the frequency table.

$$
\begin{aligned}
I(i = j) \quad &= 1, \quad i = j \\
&= 0, \quad i \neq j
\end{aligned}
$$

The δ_i parameters represent the number of homogamous relationships above and beyond those predicted by ancestry or birthplace. Exponentiating the δ_i parameters provides a factor which indicates how many times greater (or less) is the number of couples expected to have a homogamous partnership, over and above the independence model. Thus the parameters presented in our results provide a measure of how many times greater is the number of homogamous couples than would be expected by chance, given the total number of males and females in the relevant ethnic groups. The larger the quasi-independence parameter, the stronger the pattern of homogamy. For a more detailed explanation of quasi-independence models and other relevant statistics, see Goodman (2007).

4.4   Results

The examination of homogamy is divided into three sections on Indigenous partnering, intermarriage by birthplace, and intermarriage by ancestry.

4.4.1   Indigenous Status

This part of the analysis uses data derived from the Indigenous status question on the census, which asks whether the respondent is of Aboriginal and/or Torres Strait Islander origin. The self-identification of Indigenous status raises some unique measurement issues. The number of Australians identifying as Aboriginal or Torres Strait Islander has more than doubled over 25 years, reaching 548,370 in 2011. Over and above natural increase, more Australians think of themselves as Indigenous and/or are more inclined to declare this identity on their census forms (ABS 1999).

Table 4.1 shows the percentage of Indigenous men and the percentage of Indigenous women in homogamous partnerships, for each region of Australia. The patterns shown in the table for 2011 are consistent with those of 2001 and 2006, where the percentage of Indigenous people in homogamous relationships was lower in capital cities and higher in the remainder of each state (Heard et al. 2009a). Regional Northern Territory and Western Australia had the highest percentages of Indigenous people in homogamous partnerships, with their capitals Darwin and Perth leading the cities.

Overall there is a trend towards exogamy. There is a decrease in the percentage of individuals in homogamous relationships across Australia, even where there was increase between 2001 and 2006. The few exceptions are the stable percentages in the Northern Territory, and the increase in regional Tasmania.

Across Australia, 40.9 % of partnered Indigenous women and 43.3 % of partnered Indigenous men were in homogamous partnerships. By comparison, the non-Indigenous partners of the 59.1 % of Indigenous women who intermarried represented only 0.8 % of non-Indigenous partnered men, and the non-Indigenous partners of the 56.7 % of Indigenous partnered men who intermarried represented 0.7 % of partnered non-Indigenous women. With only two groups represented in the data (Indigenous and non-Indigenous) there are insufficient groups to parameterise a log-linear model. However, we can examine the odds ratios for Indigenous and non-Indigenous males and females. Converting the percentages to odds ratios, we find that a non-Indigenous male is 162 times more likely to have a non-Indigenous partner than an Indigenous male is to have an Indigenous partner (compared to 159 times in 2006). The odds for a non-Indigenous female are 197 (204 times in 2006) times that of an Indigenous female.

The odds, like the percentages, vary considerably by location. With the data described here it is not possible to disentangle attraction from availability. It is likely

Table 4.1 Indigenous couples and individuals in homogamous relationships by Australian region, census years

Region	Homogamous Indigenous couples (no.)	Indigenous partnered males (no.)	Homogamous (%)			Indigenous partnered females (no.)	Homogamous (%)		
			2011	2006	2001		2011	2006	2001
Greater Sydney	836	5,338	15.7	18	17	5,536	15.1	17	16
Rest of New South Wales	3,737	11,385	32.8	37	40	12,090	30.9	35	38
Greater Melbourne	288	1,934	14.9	18	17	1,957	14.7	18	16
Rest of Victoria	439	1,818	24.1	28	29	1,979	22.2	25	27
Greater Brisbane	763	4,147	18.4	21	22	4,441	17.2	19	20
Rest of Queensland	6,088	11,543	52.7	56	59	12,372	49.2	51	53
Greater Adelaide	306	1,243	24.6	29	27	1,374	22.3	26	24
Rest of South Australia	906	1,513	59.9	62	69	1,611	56.2	59	64
Greater Perth	840	2,284	36.8	43	47	2,380	35.3	41	44
Rest of Western Australia	3,214	4,278	75.1	77	79	4,538	70.8	73	75
Greater Darwin	477	1,001	47.7	49	50	1,093	43.6	42	43
Rest of Northern Territory	5,392	5,643	95.6	96	95	5,812	92.8	92	92
Greater Hobart	136	811	16.8	18	16	856	15.9	18	15
Rest of Tasmania	378	1,679	22.5	21	20	1,843	20.5	19	19
Australian Capital Territory	96	581	16.5	19	22	546	17.6	21	25
Australia (total)	23,895	55,216	43.3	48	51	58,464	40.9	45	48

Table 4.2 Indigenous males and females in homogamous relationships (per cent) by region and highest qualification, 2011

| Region | Highest qualification | | | | | |
| | Year 10 or lower (including none) | | Year 11 or 12 | | Certificate/ Diploma/Degree | |
	Male	Female	Male	Female	Male	Female
Greater Sydney	19.9	17.2	11.4	13.0	12.0	11.4
Rest of New South Wales	39.7	35.9	27.4	26.9	21.8	21.7
Greater Melbourne	14.2	14.6	15.1	11.9	11.1	11.9
Rest of Victoria	29.5	23.5	20.0	19.0	13.4	15.4
Greater Brisbane	20.1	18.0	17.6	16.3	15.0	14.6
Rest of Queensland	60.7	53.5	54.4	51.5	37.4	36.7
Greater Adelaide	29.2	27.5	19.4	16.8	16.3	13.5
Rest of South Australia	69.7	67.0	46.1	49.0	39.5	35.3
Greater Perth	46.1	42.9	33.5	30.0	22.6	22.5
Rest of Western Australia	82.1	76.3	73.6	68.1	54.0	48.2
Greater Darwin	60.8	46.7	40.4	45.0	35.0	35.1
Rest of Northern Territory	98.3	95.9	96.5	91.1	81.9	79.6
Greater Hobart	21.9	16.1	6.2	12.0	10.7	12.1
Rest of Tasmania	27.5	22.3	20.3	25.6	15.2	14.4
Australian Capital Territory	21.4	25.4	11.3	13.7	13.9	9.7
Australia (total)	53.4	48.2	42.6	40.7	26.1	25.1

that the higher rates of homogamy outside of the capital cities, and particularly in Western Australia and Northern Territory, are due to greater social interaction with and availability of potential Indigenous partners, but the variation could also indicate different social norms or differences in ethnic identification.

Table 4.2 includes an additional variable relating to educational attainment. In most regions, the association between education and homogamy remains straightforwardly negative: the percentage of individuals in homogamous partnerships is highest for those with minimal education (Year 10 or lower), and lowest for those who have completed a post-school qualification.

The table suggests that education increases intermarriage, particularly in regional areas where Indigenous homogamy is otherwise strong. In regional Western Australia, for example, rates of homogamy are 28 percentage points lower for Indigenous men and women with post-school qualifications than for their counterparts whose highest qualifications were 'Year 10 or lower'. A clear educational gradient also applies in most of the capital cities. Yet the data also show that in the bigger cities, high rates of intermarriage prevail regardless of educational attainment. In Greater Sydney, Greater Melbourne and Greater Brisbane, 80 % or more of Indigenous men and women are exogamous, even among those with the lowest qualifications.

4.4.2 Birthplace

Table 4.3 shows the various combinations of birthplaces for couples. The degree of change between 2006 and 2011 is small. There has been a small increase in the percentage of couples where both partners are Australia-born, and an increase in the percentage of couples where both partners are overseas-born. This is possible due to a lower percentage of couples where one or both birthplaces are unknown, indicating an improvement in the validity of the data from the 2011 census.

Overall, 18 % of couples included an Australia-born partner and an overseas-born partner. Many more couples in which both partners were born overseas are also exogamous. Table 4.4 shows the proportion of individuals partnered to someone

Table 4.3 Couples by birthplaces of partners, census years

	1991		2006		2011	
	('000)	%	('000)	%	('000)	%
Both partners born in Australia	2,130.5	58	2,317.3	54	2,429.9	55
Male born overseas	339.0	9	388.0	9	417.8	9
Female born overseas	257.4	7	335.6	8	386.5	9
Both partners born overseas	795.7	22	893.1	21	1,076.7	24
One or both birthplace unknown	142.7	4	346.6	8	96.6	2
Total	3,666.3	100	4,280.6	100	4,407.5	100

Table 4.4 Males and females by region and country of birth[a], partner born in Australia or partner born in same country, 2011

	Males			Females		
	Partnered ('000)	Partner born in Australia (%)	Partner born in same country (%)	Partnered ('000)	Partner born in Australia (%)	Partner born in same country (%)
Australia	2,825.4	86.0	86.0	2,855.4	85.1	85.1
Asia						
Afghanistan	6.3	2.6	88.4	5.9	1.2	94.9
Bangladesh	9.1	2.4	91.0	8.6	1.7	95.8
Cambodia	8.4	2.8	78.5	9.0	8.1	72.8
China (excludes SARs and Taiwan)	75.0	1.9	88.1	86.3	8.9	76.5
Hong Kong (SAR of China)	18.5	9.0	55.6	19.5	15.0	52.7

Table 4.4 (continued)

	Males			Females		
	Partnered ('000)	Partner born in Australia (%)	Partner born in same country (%)	Partnered ('000)	Partner born in Australia (%)	Partner born in same country (%)
India	90.9	6.5	85.3	87.5	4.9	88.6
Indonesia	13.0	14.1	69.7	18.5	25.5	48.8
Japan	4.9	15.9	68.8	14.2	45.3	24.0
Korea, Republic of (South)	16.4	2.1	91.9	19.7	12.4	76.5
Malaysia	27.1	15.2	57.4	32.0	24.2	48.5
Pakistan	8.3	8.0	76.3	7.7	5.3	82.6
Papua New Guinea	6.3	63.2	16.3	7.4	65.2	14.0
Philippines	33.0	7.9	87.3	62.0	34.1	46.5
Singapore	9.8	22.2	41.0	12.1	29.6	33.3
Sri Lanka	27.3	8.6	82.9	26.4	7.7	85.6
Taiwan	5.1	3.0	72.7	7.2	16.1	51.7
Thailand	4.3	14.7	62.5	15.7	50.6	17.3
Vietnam	51.3	2.9	87.7	55.4	7.8	81.2
Europe/Middle East						
Croatia	16.5	20.4	59.7	14.1	13.5	70.3
England	292.8	46.3	36.8	253.6	42.8	42.5
France	6.9	41.5	23.3	6.4	41.5	25.1
Germany	31.6	46.4	25.0	29.0	43.0	27.3
Greece	36.8	20.9	70.1	31.0	10.1	82.9
Iran	9.3	9.0	76.4	8.7	7.1	81.5
Iraq	13.2	4.0	85.7	12.4	2.3	91.3
Ireland	20.5	40.2	32.4	17.3	34.2	38.4
Italy	69.7	32.5	55.6	50.6	15.8	76.7
Lebanon	29.0	27.9	63.0	24.2	15.4	75.7
Netherlands	26.0	52.8	24.9	20.4	46.6	31.7
Poland	13.0	21.1	59.9	13.9	24.4	56.4
Scotland	42.5	45.7	27.7	37.4	41.4	31.4
Turkey	11.3	20.0	69.4	9.8	12.3	80.0
Wales	9.7	44.1	21.4	8.1	36.8	25.7
Other						
Canada	10.2	59.9	14.6	11.3	63.1	13.2
New Zealand	123.1	42.3	40.6	112.6	38.8	44.4
South Africa	40.7	22.1	60.2	40.6	20.5	60.3
United States of America	19.2	57.8	17.7	19.4	59.4	17.6

[a]Includes countries of birth nominated by at least 4,000 partnered males and 4,000 partnered females

from the same birthplace, and the proportion partnered to someone born in Australia, for countries with sufficient migrant populations to create meaningful percentages. These proportions vary widely by birthplace. Since birthplace does not necessarily reflect ancestry, the foreign born groups with high percentages partnered to Australia-born individuals may still represent intermarriage between individuals with the same ancestry (for example an Australia-born Chinese person partnered with a China-born Chinese person).

Eighty-six percent of Australia-born men and 85.1 % of Australia-born women had a partner also born in Australia. These high percentages are not surprising for two reasons. Firstly, birthplace alone does not account for ancestry or Indigenous status, so some of these couples are potentially "intermarried" across other measures of ethnicity. Secondly, Australia-born individuals represent the vast majority of people living in Australia. Therefore, when Australia-born individuals intermarry, their numbers represent a relatively small percentage of the Australia-born majority, but much larger percentages of the minority groups they intermarry with. This issue will be addressed later in this section, where a log-linear model is used to compare the level of homogamy, while controlling for the relative sizes of the different groups.

A high percentage of males and females born in Afghanistan, Bangladesh, Iran, Iraq, Pakistan, and Sri Lanka have a partner who was born in the same country. Although this could be interpreted as a lower rate of integration into Australian society, it is more likely a reflection of couples migrating to Australia together. The census data does not indicate where the relationship formed. This means that inferences can be made about the patterns of partnered Australian residents, but not the formation of relationships within the Australian marriage market. Although this information cannot be directly determined, the examination of ancestry by generation (see Sect. 4.4.3) gives some indication of intermarriage by successive generations of ethnic groups in the Australian context.

In contrast, the percentage of homogamous partnerships among those born in Anglo-Celtic and other English speaking countries is much lower (meaning intermarriage is higher). However, this does not necessarily mean that those in exogamous relationships are with an Australia-born partner. It is common for those born in New Zealand, South Africa and England to have a partner born in one of the other two countries rather in Australia (data not shown).

There is a strong asymmetric pattern in the partnering of people born in Thailand, the Philippines, Japan and Korea (although small asymmetries exist among many other groups), where a large percentage of women born in each of these countries have an Australia-born partner, but only a small percentage of men born in these countries have an Australia-born partner. Among those born in Thailand, 15 % of men have an Australian-born partner compared to 51 % of women.[2] Gender asymmetries have been attributed to differing gender roles in Asian families (Penny and Khoo 1996). In some cases, such asymmetries point to ethnicity-specific marriage markets between

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[2] This asymmetry is also reflected in the total number of partnered people, with nearly three times as many partnered Thai-born women as men (in the general population there are about twice as many Thai-born women as men).

Table 4.5 Homogamy by country of birth, ten highest and ten lowest quasi-independence parameters, 2011

Highest homogamy		Lowest homogamy	
Country of birth	QI parameter	Country of birth	QI parameter
Bangladesh	555.9	England	2.4
Nepal	486.5	Australia	4.6
Iraq	288.1	New Zealand	5.3
Afghanistan	270.2	Canada	5.7
South Korea	191.6	Scotland	5.8
Iran	187.8	United States of America	5.9
Pakistan	119.8	Papua New Guinea	8.1
Sri Lanka	114.2	Netherlands	10.8
India	112.6	Wales	11.8
Bosnia & Herzegovina	112.0	Germany	13.8

Asia-born women and Australia-born men. In particular, the excess of Filipino women over men as a consequence of patterns of spouse sponsorship is a long-recognized phenomenon in Australia (Hagan 1989; Ethnic Affairs Commission of New South Wales 1992; Iredale 1994; Holt 1996; Robinson 1996; Khoo 2001). In other cases, asymmetry is due to gendered partnering patterns between overseas-born groups, rather than gender differences in rates of partnering with the Australia-born. For example, Afghanistan-born men are more likely than Afghanistan-born women to have a partner born in Pakistan.

The next step is to analyse the parameters of a quasi-independence model. That is, for each birthplace group, how do rates of homogamy compare to what would be expected by chance, once the relative sizes of the groups are taken into account? The p-values for the model are not shown for two reasons. Firstly, given the size of the counts, every p-value for every parameter is very small, giving no real indication of significance. Conversely, goodness of fit measures become very large.

Table 4.5 shows the ten highest and ten smallest homogamy parameters from the quasi-independence model for country of birth. Controlling for the sizes of the groups, the patterns of homogamy are in keeping with the analysis of percentages. Countries such as Bangladesh, Iraq and Afghanistan still show a high degree of homogamy once the relative sizes of the various groups are controlled for by the log-linear model. Since these groups are predominately from recent waves of immigration, it is difficult to distinguish preferences from couple migration patterns. However, a partial solution to this is to examine generation in conjunction with ancestry (see Sect. 4.4.3).

Of the ten least homogamous birthplace groups, the majority are Anglo-Celtic, and all showed low percentages of homogamous partnership in Table 4.4. Those born in the Netherlands and Germany also recorded low rates of homogamy. Although Papua New Guinea may seem like an incongruous birthplace in a table otherwise dominated by Anglo-Celtic and European countries, it is geographically close to Australia, and a large percentage of individuals born in Papua New Guinea have an Australia-born partner.

The quasi-independence model is useful in revealing a low parameter for Australia-born couples. Although 85 % of Australia-born women and 86 % of Australia-born men have an Australia-born partner, this high percentage is largely due to the Australia-born individuals comprising a large proportion of the population. The quasi-independence parameter shows that once the relative sizes of the different birthplaces are controlled for, the number of homogamous couples is only 4.6 times higher than would be expected by chance, given the size of the group. This is the second-lowest rate of homogamy across the birthplaces analysed.

4.4.3 Ancestry

Ancestry is a variable that represents a self-nominated identity. In the Australian Census individuals may nominate multiple ancestries in any order, making the data difficult to interpret. This analysis focuses on individuals who nominated a single ancestry (representing 83.4 % of partnered men and 85.6 % of partnered women). This also provides mutually exclusive groups for modelling.

Ancestry can provide more information than birthplace in the sense that knowing that someone is born in Australia (for example) does not provide a complete picture of his or her cultural or ethnic identity. Ancestry also makes distinctions that birthplace cannot, particularly where there may be several separate ethnicities or cultures within a single country of birth (such as Assyrian and Arab, or Tamil and Sinhalese). This does mean that there are a greater number of smaller groups than in the birthplace analysis.

Table 4.6 shows the ancestries with the highest rates of homogamy, the lowest rates of homogamy and the largest differences between male and female rates. There are clear similarities to the analysis by birthplace, with many of the same patterns of high, low, or asymmetric partnering that were present in the birthplace data appearing in the data for the corresponding ancestry (or ancestries). The most homogamous ancestry groups overlap with the most homogamous birthplace groups (Bangladeshi, Afghan, Iraqi).

Interestingly, however, the rate of homogamy recorded by those with Australian Aboriginal ancestry (93–94 %) is more than twice the rate of Indigenous homogamy suggested by the earlier analysis of Indigenous status, which is separately measured in the Census. This highlights a stark social difference between Indigenous Australians with some Aboriginal and/or Torres Strait Islander heritage, and those whose sole nominated ancestry is Australian Aboriginal. The difference may relate to cultural preference, but it is also likely that opportunities for intermarriage are limited in the more remote locations of those whose sole ancestry is Australian Aboriginal. The 2011 census data confirms the regional concentration of these individuals: 72 % of individuals nominating Australian Aboriginal as their sole ancestry were living in Very Remote or Remote Australia, according to the ABS' remoteness classification, rising to 84 % if Outer Regional areas are included. A state-by-state analysis shows that 40 % of sole-ancestry Australian Aborigines reside in the Northern Territory outside of Greater Darwin, 21 % in Queensland outside of Greater Brisbane and 15 % in Western Australia outside of Perth (data not shown).

Table 4.6 Lowest homogamy, highest homogamy and largest gender difference in rate of homogamy, by ancestry[a], 2011

Lowest homogamy				Highest homogamy				Largest gender difference in rate of homogamy		
Ancestry	Male (%)	Ancestry	Female (%)	Ancestry	Male (%)	Ancestry	Female (%)	Ancestry	Female (%)	Male (%)
Canadian	17	Canadian	15	Korean	94	Bangladeshi	97	Thai	22	80
Swedish	18	Swedish	16	Nepalese	94	Nepalese	96	Japanese	33	80
American	18	American	19	Australian Aboriginal	94	Afghan	95	Filipino	55	92
Austrian	20	Thai	22	Bangladeshi	94	Tamil	94	Indonesian	51	81
Danish	20	Danish	23	Chinese	93	Australian Aboriginal	93	Malay	52	71
Welsh	20	Austrian	24	Tamil	93	Sudanese	93	Russian	52	65
Scottish	24	Welsh	25	Afghan	93	Iraqi	93	Korean	83	94
Dutch	27	Scottish	28	Filipino	92	Indian	93	Khmer (Cambodian)	80	89
Swiss	28	Latvian	30	Indian	92	Pakistani	92	Samoan	81	72
Latvian	29	Dutch	30	Sudanese	92	Sinhalese	92	Finnish	33	41
German	29	German	32	Vietnamese	92	Turkish	91	Egyptian	81	73
Irish	30	New Zealander	32	Sinhalese	91	Jewish	90	Vietnamese	84	92
New Zealander	30	Swiss	32	Iraqi	90	Assyrian	89	Chinese	86	93
French	33	Japanese	33	Khmer (Cambodian)	89	Iranian	88	Tongan	78	71
Slovene	39	Irish	33	Assyrian	88	Arab	88	Italian	69	62
Czech	40	Finnish	33	Jewish	87	Lebanese	87	Lao	68	74
Ukrainian	41	French	35	Pakistani	86	Chinese	86	Burmese	70	76
Finnish	41	Ukrainian	39	Turkish	86	Vietnamese	84	Fijian Indian	79	85
Hungarian	43	Slovene	40	Fijian Indian	85	Korean	83	Arab	88	82

[a]Includes ancestries nominated by at least 2,000 respondents

Table 4.7 Homogamy by ancestry, ten highest and ten lowest quasi-independence parameters, 2011

Highest homogamy		Lowest homogamy	
Ancestry	QI parameter	Country	QI parameter
Australian Aboriginal	280.2	Scottish	2.8
Indian	166.9	Irish	3.7
Bangladeshi	166.9	Syrian	5.3
Sri Lankan	117.9	German	6.2
Burmese	109.3	English	6.6
Nepalese	106.0	Dutch	6.9
Sinhalese	91.9	Australian	7.4
Turkish	89.6	Welsh	15.7
Iranian	89.3	New Zealander	16.2
South African	81.9	Italian	16.7

The ancestry groups with the lowest percentages of homogamous individuals (and therefore the highest rates of intermarriage) are still the Anglo-Celtic ancestries (English, New Zealander, Canadian), followed by other European ancestries (French, German, Czech). Whilst birthplace does mask some cultural heritage, ancestry does the opposite. The interpretation of ancestry varies, but many respondents nominate the ancestry of parents or grandparents. As a result, over half of Australia-born men and women claim English ancestry, whereas only a third nominate Australian ancestry (data not shown).

As with birthplace, the largest gender asymmetry is seen in some of the Asian ancestries (notably Thai, Japanese, Filipino and Indonesian), where a much larger percentage of women than men have intermarried, predominantly with men of Australian or English descent (data not shown). Table 4.6 also shows the ancestries where a greater percentage of males are intermarried (Samoan, Tongan, Egyptian and Arab). However, the gender asymmetry is much smaller in these cases.

Table 4.7 shows the ten highest and ten lowest quasi-independence parameters for ancestry. With the quasi-independence model controlling for group size, the Australian Aboriginal ancestry group has the highest rate of homogamy, with the number of homogamous partnerships being 280 times greater than we would expect under an independence model, and nearly 69 % greater than the next highest groups. The remaining groups in the table are predominantly the same groups prominent in the percentages (Table 4.6), with the exception of South Africans (although there are a number of countries with only slightly lower QI parameters outside of this top ten). The ten ancestries with the lowest rates of homogamy are all European or Anglo-Celtic, with the exception of Syrian. The reason for this is a high rate of intermarriage with those of Lebanese ancestry, with approximately 900 Syrian/Lebanese intermarried couples compared to only about 100 Syrian/Australian intermarried couples (data not shown).

It can be useful to consider ancestry in conjunction with birthplace variables in order to get some sense of how well established in Australia are individuals and

Table 4.8 Females and males in homogamous partnerships by ancestry and generation, 2011

Ancestry	Females by generation (%)			Males by generation (%)		
	1st	2nd	3rd or later	1st	2nd	3rd or later
Afghan	93.8	80.0	[a]	91.1	71.0	[a]
Bangladeshi	94.6	29.0	[a]	91.3	37.5	[a]
Chinese	79.8	31.0	8.0	91.0	46.6	11.1
Croatian	71.8	31.0	12.7	65.3	28.4	9.4
Dutch	34.1	8.9	7.4	28.1	8.0	6.3
English	64.6	50.5	69.6	61.0	51.0	70.6
Filipino	47.1	18.2	14.9	88.3	32.3	[a]
French	31.0	4.5	1.6	29.7	3.9	1.4
German	30.7	7.1	16.4	28.1	7.0	15.4
Greek	88.0	58.4	27.5	82.1	51.1	21.7
Hungarian	53.0	7.5	5.8	44.7	6.9	4.8
Indian	89.7	29.4	29.3	88.8	34.0	20.8
Indonesian	43.0	24.6	[a]	73.6	28.2	[a]
Irish	33.2	15.3	23.5	30.9	14.4	22.6
Italian	77.5	43.6	14.1	67.5	36.6	12.2
Japanese	24.4	3.6	[a]	72.6	16.4	[a]
Korean	77.9	41.6	[a]	93.0	55.2	37.5
Lebanese	88.1	70.8	31.9	84.2	60.2	25.4
New Zealander	28.4	3.6	3.4	25.8	2.4	3.1
Pakistani	89.2	60.5	[a]	82.7	64.9	[a]
Polish	51.8	13.9	5.1	55.0	12.2	4.8
Portuguese	60.4	26.3	3.2	57.3	21.9	7.0
Russian	47.0	16.4	1.9	63.8	16.8	3.8
Scottish	30.4	9.9	17.1	26.2	8.2	14.1
Serbian	81.2	39.5	26.3	75.4	32.3	19.2
South African	58.9	7.5	8.2	62.1	5.7	[a]
Sri Lankan	80.4	9.3	[a]	79.1	7.5	[a]
Turkish	88.9	75.2	65.7	82.6	64.6	43.2
Vietnamese	80.1	36.5	[a]	90.2	49.5	[a]
Welsh	27.9	3.5	4.4	22.1	2.3	3.3

[a]Percentages not calculated where there were 200 or fewer individuals belonging to the third generation or later

groups with different ethnic backgrounds. The census provides information on the birthplaces of individuals and of their parents. We derived an additional 'generation' variable using the following definitions: a person born overseas and with one or both parents born overseas is 'first generation'; a person born in Australia with one or both parents born overseas is 'second generation'; and a person with two Australia-born parents is 'third generation or later'.

In Table 4.8, the percentage of same ancestry partnerships among first generation Australians can be compared to rates in the second, third and subsequent generations.

All ancestries show a decrease, often dramatic, in the percentage of endogamous partnerships between the first and second generations, and most also between the second and third or later. For some groups with a shorter migration history to Australia, there are insufficient numbers of individuals of the third generation (or later) to calculate a meaningful percentage. Data for some of the more recent migrant groups from Africa and the Middle East relate to the first generation only, and are not included in the table.

An anomaly is the increase in the rates of homogamy for English, Irish, Scottish and German individuals from the second generation to the third or later. These are among the most common ancestries nominated in the Australian census. Although we cannot be certain of the reason for this pattern, it may be simply that so many Australians claim some distant ('third generation *or later*') Anglo-Celtic or Anglo-Saxon heritage, making homogamy (in its very broadest sense) very likely.

There is great variation by ancestry in the proportion of homogamous partnerships reported by first generation immigrants. Again, this is likely to reflect variations in the extent to which overseas-born individuals are partnered prior to migration. Clearly, for example, the majority of migrants from New Zealand have arrived unpartnered, and record low rates of homogamy even in the first generation. By the second and subsequent generations, only very small proportions (3–4 %) are homogamous.

However, the 'speed' with which homogamy decreases in successive generations also varies greatly by ancestry, and may provide a useful measure of integration. For example, from similar levels of homogamy (91 %) in the first generation, homogamy among men of Bangladeshi descent decreased far more in the second generation (to 38 %) than did homogamy among men of Afghan descent (71 % in the second generation). The same is true for women with these ancestries. Comparisons can also be made between men and women of the same ethnic backgrounds. From the second to the third and subsequent generations, homogamy decreased by more than 20 percentage points among men of Turkish descent, but by less than 10 percentage points among women of Turkish descent.

4.5 Discussion

Intermarriage provides a way of examining social distance between groups (Kalmijn and Flap 2001). In the Australian census data we see different patterns of endogamy and exogamy for different Indigenous, ancestry and birthplace groups. These patterns may have resulted from individual preferences for a specific marriage partner, or from structural constraints in the marriage market (Bull 2005). Patterns vary widely among different ethnic groups within the same multi-ethnic setting, even accounting for the respective sizes of these populations, and in keeping with the view that cultural similarity or dissimilarity plays a significant role (Muttarak and Heath 2010; Dribe and Lundh 2011; Kalmijn and van Tubergen 2010).

In Australia, one key question is whether multiculturalism may encourage endogamy and thereby perpetuate group boundaries (Blainey 1994). The partnering behaviour of more recent waves of migrants from Asia and the Middle East will not

necessarily follow the same pattern as earlier waves of European migrants if their real or perceived cultural distance from the Anglo-Celtic majority is greater (Jones and Juijkx 1996; Giorgas and Jones 2002). Our data suggests a high degree of homogamy among those born in the Middle East and Indian subcontinent.

While these high levels of homogamy may be partly due to ethnic preferences, it is probable that individuals from these groups are also more likely to be in homogamous partnerships before they come to Australia. It may be decades before it is possible to fully examine the integration of all the recent migrant groups from the Indian subcontinent and the Middle East into Australian society, based on the intermarriage patterns of the second and third generations of these groups. However, the generational ancestry data does show that among the longer-established groups, the second and third generations are much more likely to intermarry. Therefore, as for communities originating from earlier waves of European migration, all signs are that intermarriage steadily increases the longer these groups are present in Australia, albeit at a faster or slower pace depending on the group in question.

Muttarak and Heath (2010) have described a pattern of segmented assimilation in the UK, where individuals from some groups enter into exogamous relationships more than others. In particular, they found that those from Indian, Pakistani and Bangladeshi backgrounds were less likely to intermarry. However, when considering other factors, they concluded:

> It appears that members of the three South Asian groups do indeed respond to opportunity structures in much the same way as other groups do and that the solidary community might not be quite as powerful in inducing conformity as strong versions of the theory [segmented assimilation] would suggest.

The same would appear to hold in the Australian context. For individuals belonging to the longer-established of the South Asian migrant communities in Australia, such as those of second and third generation Indian and second generation Pakistani and Bangladeshi ancestries, there is a pattern of greatly increased intermarriage when compared to first generation migrants. Indeed, homogamy drops particularly quickly between the first and subsequent generations among those of Indian and Bangladeshi descent, and even more so among those of Sri Lankan ancestry. The shift between generations is less dramatic among Australians of Middle Eastern descent, but intermarriage nevertheless increases steadily.

The asymmetry in the Australian-Asian partnerships is very similar to that observed in New Zealand Census data, particularly in 2001 and 2006, where Asian women were more likely to have a New Zealand-born European male partner than vice-versa (Walker 2010). In some cases, this is likely due to the continuing phenomenon of Australian men sponsoring spouses from specific countries for intermarriage (Khoo 2001), although visa data is required to verify this. The sponsorship of foreign spouses has little to do with the integration of diverse ethnic groups within Australia, but shows that intermarriage is a phenomenon that transcends national borders.

The final pattern of interest in this data is that of intermarriage between Indigenous and non-Indigenous Australians. Data from the 2006 Census showed that rates of intermarriage between Indigenous and non-Indigenous Australians were high and

increasing in the capital cities, but that Indigenous homogamy remained strong outside of the capital cities, particularly in the Northern Territory and Western Australia. For Australians who identified themselves as having Indigenous heritage, this remained the case in the 2011 Census. However, among those who nominated a sole ancestry of "Australian Aboriginal", there was a particularly high degree of homogamy. At 93–94 %, this level of homogamy for Australian Aboriginals (as defined by ancestry) is comparable only with the rate of homogamy recorded by Indigenous Australians (as defined by the separate Indigenous status question) living in the remote Northern Territory outside of Darwin. Indeed, we suggest that this phenomenon is largely due to the concentration of sole-ancestry Australian Aborigines in more remote locations. Similar patterns are seen among the Indigenous Maori population in New Zealand (Walker 2010): those in urban centres are much more likely intermarry than those in rural areas, and those who identify as Maori only are less likely to intermarry than those who nominate multiple ethnicities.

Indigenous Australians with higher levels of education are more likely to be intermarried. Educational differences are particularly evident outside the major capitals, where homogamy is otherwise high. This pattern may partly reflect opportunity, due to the mix of Indigenous and non-Indigenous Australians in educational institutions and in employment. More fundamentally, it suggests that intermarriage by Indigenous Australians is facilitated by equality or near-equality on socio-economic dimensions, lending support to theories of structural assimilation.

4.6   Conclusion

This analysis of the ethnic partnering patterns in the 2011 Australian Census shows similar patterns to those seen in the 2001 and 2006 censuses. The analysis extends previous research with Australian data by complementing the raw percentages with quasi-independence log-linear models.

The patterns of Indigenous partnership show very slight increases in intermarriage in most regions. The high degree of variability remains consistent with the 2001 and 2006 censuses, where intermarriage in the capital cities is much higher than in the regional areas of each state. The Northern Territory and Western Australia have the highest rates of homogamous Indigenous partnering. The Aboriginal Australian ancestry group, which was measured using a separate variable, and counted those who solely identified their ancestry as Australian Aboriginal, showed very high rates of homogamy. Although cultural factors may contribute, the concentration of this group in remote and regional areas of Australia suggests an explanation centred around opportunity.

The examination of both birthplace and ancestry showed that those who were born in, or identified their ancestries as belonging to, European or Anglo-Celtic countries were far more likely to intermarry. The log-linear models showed that once group size was adjusted for, this was the case for the Australia-born too. Those from the Middle East, the Indian subcontinent, and other non-English speaking

countries were less likely to intermarry. From census data alone it is difficult to determine whether this is an indicator of preference, or merely reflects patterns of immigration, where couples of the same ancestry or birthplace migrate to Australia together. However, for groups whose migration can be traced across multiple generations, the second generation invariably records greater rates of intermarriage than the first, while third (and later) generations tend to have higher percentages of intermarriage still. The other notable pattern in the birthplace and ancestry data is the asymmetry of partnering seen in some Asian groups (in particular Thailand and the Philippines), with a much higher percentage of Thai and Filipino women partnered to Australian men than vice-versa.

Future research in the area of intermarriage in Australia could usefully involve matching data from other sources. Whilst the Census provides information about all Australians, it can only provide limited detail. Information about partnership status upon immigration, lengths of relationships, divorce and repartnering could supplement the census data and provide a more complete picture of interethnic partnering in Australia.

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Chapter 5
Relationship Dissolution

Belinda Hewitt and Janeen Baxter

5.1   Introduction

As in most other western developed countries, marriage breakdown has increased in
Australia, particularly since the end of World War 2. While the increase in the rate
of divorce in Australia has slowed since the 1980s and may have even stabilized and
started to decline, the nature and characteristics of divorcing couples continue to
change. It is very likely that these changes in divorce trends are underpinned at least
in part by the rise of unmarried, or de facto, cohabitation (henceforth cohabitation)
as an alternative or 'stepping stone' to marriage. Cohabiting relationships are less
stable than marital relationships, but we know little about the stability of cohabiting
relationships from official statistics. Thus, official statistics underestimate the true
extent of relationship dissolution in the Australian population. In this chapter we
document historical trends, explore changes in the nature and characteristics of
divorce in Australia and examine differences in the dissolution of cohabiting and
marital relationships using survey data.

B. Hewitt (✉)
School of Social Science and the Institute for Social Science Research,
University of Queensland, Brisbane, QLD, Australia
e-mail: b.hewitt@uq.edu.au

J. Baxter
Institute for Social Science Research, University of Queensland,
Brisbane, QLD, Australia

5.2   Historical Trends

Rates of divorce in Australia have increased considerably over the last century. Figure 5.1 reports the crude divorce rate[1] in Australia since 1901.[2] At the turn of the twentieth century divorce was virtually non-existent in Australia, with only 398 divorces granted in 1901 and a crude divorce rate of less than 0.1 (ABS 1971). The rate then increased gradually from the mid-1960s until 1975.

In 1976 no-fault divorce was introduced with the implementation of the 1975 Family Law Act and the crude divorce rate spiked to 4.6 per thousand head of population aged over 15 (Fig. 5.1). The new *Family Law Act 1975* sought to establish a law based upon two pillars: 'the support for marriage and family; and the right of a party to leave a marriage upon its irretrievable breakdown, the latter being evidenced by 12 months separation of the parties' (Australian Parliament House of Representatives Standing Committee on Legal and Constitutional Affairs 1998: 95). The 14 grounds of divorce were replaced by one – irretrievable breakdown. Within a few years the crude divorce rate dropped to around 2.6 per thousand head of population over the age of 15 and has oscillated between 2.5 and 3.0 since the late 1970s. The introduction of the 1975 Family Law Act, and with it no-fault divorce, dramatically and permanently changed the rate of divorce in Australia.

Some have argued that the easy access to divorce provided by the Family Law Act was a major cause of the substantial increase in divorce in Australia from the mid-
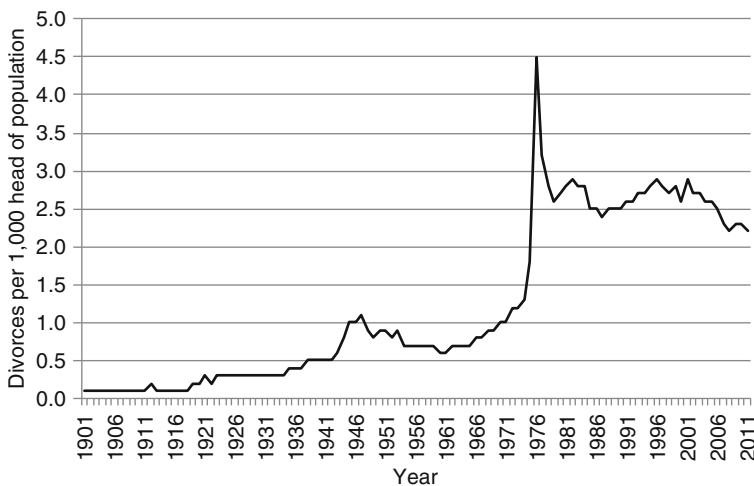

Fig. 5.1 Crude divorce rate, Australia 1901–2011 (ABS 1971, 2005a, 2012b)

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[1] The crude divorce rate is the number of divorces granted each year per 1,000 head of population aged 15 and over.

[2] Prior to 1901 Australian divorce data were collected independently by each colonial state and reporting varied from state to state. Consequently reliable Australia-wide figures are not available before 1901.

1970s. The data indicate, however, that the rise in the crude divorce rate following the introduction of the Family Law Act was relatively short-term. Within five years of the Act being introduced crude divorce rates had settled to a rate that reflected linear trends established in the mid-1960s (Ozdowski and Hattie 1981). It is likely that the spike in divorce was primarily a response to pent-up demand from couples that had separated but not divorced in the late 1960s and early 1970s. There is some survey evidence for this. Burns (1980a, b) conducted a study on separation and divorce in late 1975, prior to the introduction of no-fault divorce, and found that some separated respondents were waiting for the introduction of the Family Law Act to divorce legally. Despite minor yearly fluctuations the steady increase in the crude divorce rate evident prior to 1976 has ceased and there has been little change since the early 1980s. Since the year 2000, the trend suggests a decline in divorce (see Fig. 5.1); in 2008 divorce rates were at their lowest in 20 years (ABS 2009).

5.3 Continuity and Change Since No-Fault Divorce

Despite the plateau and decline in the crude divorce rate, divorce continues to be a pervasive feature of Australian social life. Thirty-two percent of current marriages are expected to end in divorce and this is predicted to increase to 45 % over the next few decades, with younger marriage cohorts more likely to divorce (Carmichael et al. 1996). Further, there is widespread government and community concern about divorce and its consequences as evidenced by recent government policy and legislative reforms (Australian Parliament House of Representatives Standing Committee on Legal and Constitutional Affairs 1998; Kaspiew et al. 2009).

Ongoing changes in divorce in Australia are more clearly revealed if we use measures other than the crude divorce rate. The crude divorce rate indicates the rate of breakdown in the total Australian population aged over 15, including those who are married and unmarried. Given that rates of marriage have also declined since the late 1970s, the crude rate may be under-estimating marriage breakdown because its denominator is not restricted to the married population (de Vaus 2004). An alternative indicator is a divorce rate which uses the married population as the denominator. Figure 5.2 shows the divorce rate of the married population in Australia between 1981 and 2001.[3]

Compared to the crude divorce rate, this divorce rate is much higher. While the divorce rate shows a very similar pattern to the crude divorce rate, the peaks and troughs are more pronounced. The rate of divorce has varied from a low of 10.6 per 1,000 married men or women in 1987 to a high of 13.1 in 2001. Data from the 2006 Census indicate that this figure had dropped to 12.0, and the 2011 Census data indicate that it had further declined to 11.6 (ABS 2012c). These declines are consistent with the general decline in the crude divorce rate since 2000.

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[3] Since 2001 the ABS ceased to collect information on divorce rates based on the married population and this information is now only collected in census years (ABS 2012c).
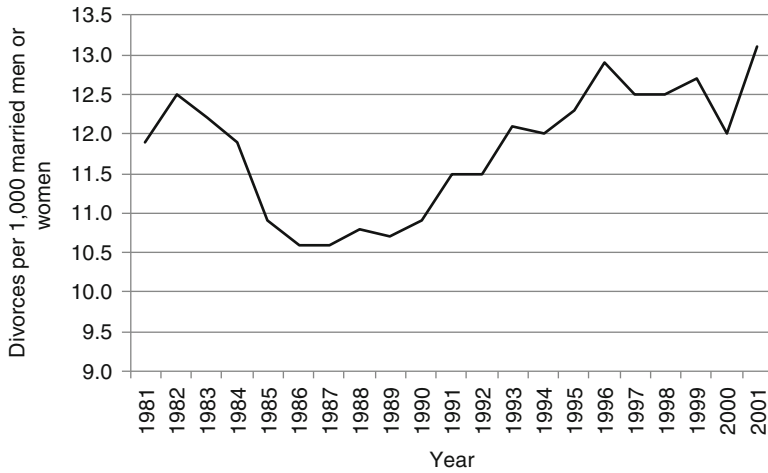
Fig. 5.2 Divorce rate, Australia 1981–2001 (ABS 2005a)

Fig. 5.3 Median age at divorce for men and women, Australia 1977–2011 (ABS 1979–1993, 1994–2001, 2005c, 2012b)

Other characteristics of divorce in Australia such as age at divorce, average time to divorce and number of dependent children involved in divorce have also changed since the 1980s. These changes reflect broader social and demographic changes in relationship formation and fertility timing in Australia over the last three decades. Figure 5.3 illustrates that since the introduction of the Family Law Act in 1976 the median age at divorce has increased from 36.1 in 1977 to 44.5 in 2011 for men and from 33.0 to 41.7 over the same period for women.
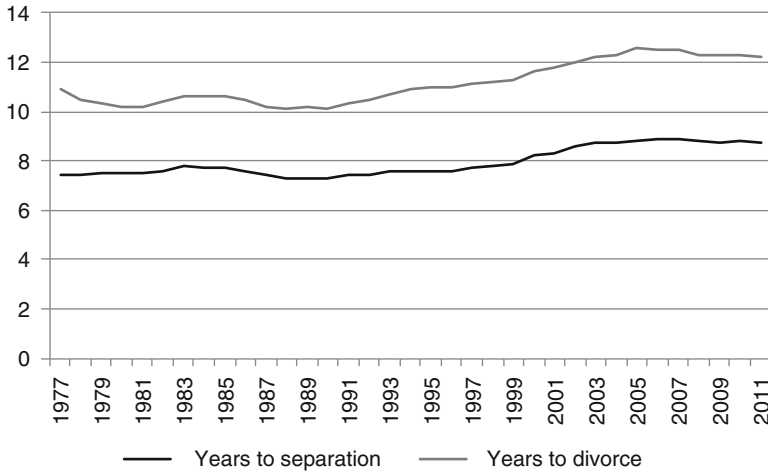
Fig. 5.4 Median duration of marriage to separation and divorce (years), Australia, 1977–2011 (ABS 2005c, 2012b)

It is likely that the median age at divorce is increasing due to two factors. First, people are marrying at older ages. In 1977 the median age at first marriage was 23.8 years for men and by 2011 this had increased to 29.7 years. Similarly for women the median age at first marriage increased from 21.4 years in 1977 to 28.0 years in 2011 (ABS 2005d, 2012c).[4] Second, the median duration of marriage to separation and divorce has increased. Figure 5.4 shows that the main increase occurred between 1997 and 2006, when the median duration of marriage to separation increased from 7.7 to 9.9 years, and of marriage to divorce from 11.1 to 12.5 years. There was also an increase in the time between separation and divorce, from 2.7 years in 1981 to 3.5 years in 2011, with most of that increase occurring during the 1990s.

The proportion of divorces involving children under the age of 18 has also changed over time. Figure 5.5 illustrates a decline in the proportion of divorces involving dependent children from 63 % in 1977 to around 50 % by 2003, and this proportion has dropped below 50 % since 2007 (ABS 2012b). This reduction in the proportion of divorces with dependent children is due in part to delayed child bearing (see Chap. 9).[5] Even though the proportion of divorces involving children has dropped since the early 1980s, the actual number of children whose parents divorce each year has remained fairly constant at around 50,000 children (ABS 2001, 2012b).

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[4] This increase in age at marriage is partly attributable to an increasing number of couples that live together in cohabiting relationships prior to marriage. In 1971 the proportion of people who cohabited before marriage was around 16 % and by 2011 was around 78 % (ABS 2005d, 2012c).

[5] The median age of all mothers giving birth increased from an all-time low of 25.4 years in 1971 (ABS 2005b) to an all-time high of 30.8 years in 2006, and has been fairly stable since, with an average age of 30.6 years in 2011 (ABS 2012a). The median age at first birth for mothers in 2011 was younger at 28.9 years (ABS 2012a). Similarly, for men, median age for all births (where the father's age was known) has increased over this same time period from 28.0 years (ABS 2005b) to 33.0 years in 2011 (ABS 2012a).

Fig. 5.5 Proportion of divorces involving children under the age of 18, 1977–2011 (ABS 2005c, 2009, 2012b)

In summary, despite a plateau and recent decline in the divorce rate, the nature and composition of the divorcing population has continued to change with increases in age at divorce and time to divorce and a decline in the proportion of divorces involving children. When considering these trends in marriage breakdown the limitations of official statistics also need to be taken into consideration.

First, official divorce statistics tend to underrepresent marriage breakdown at any given point because many marriages end in permanent separation and never proceed to divorce or do not proceed to divorce for several years; the median time from separation to divorce was 3.5 years in 2011 (ABS 2012b). In these circumstances marriage breakdown is not officially recorded until divorce is awarded (ABS 1999, 2000).[6]

In Table 5.1, we present the results of marital history information on those who had separated or divorced from their first marriage in wave 1 of HILDA (2001).[7] We find that approximately 18 % of those who had separated from their marriage had not gone on to divorce by the time of survey. The average duration of separation of those people who had separated but not legally divorced was 5.7 years. This average is 2 years longer than that reported by official divorce statistics in 2011. This is because the ABS divorce statistics are recorded when a couple divorces. While the majority of separated people had only recently separated in the HILDA sample (63 % of them having separated less than 2 years before the survey), about 20 % of the separated people had been separated for 10 years or more without divorcing.

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[6] The ABS' quinquennial census collects information about marital status (including counts of those separated), but this data is not collected as regularly as the official divorce data and does not provide information about rates of separation each given year.

[7] See Appendix for a description of the HILDA survey.

	N	%
Separated (for at least 1 year)	376	17.6
Divorced	1,767	82.4
Total	2,143	100

Table 5.1 Distribution (number and per cent (%)) separated and divorced from first marriage (HILDA 2001)

The second major limitation of official divorce statistics is that they significantly under-represent the true extent of relationship dissolution in Australia, because they do not take into account the increasing number of cohabiting relationships. In the remainder of this chapter we examine differences in the dissolution of cohabiting and marital relationships.

5.4 Marriage and Cohabiting Relationship Dissolution: Evidence from HILDA

Arguably, many of the changes in the timing of divorce and composition of the divorcing population since the 1980s are underpinned by changes in family and relationship formation and in particular the increasing number of couples who are in cohabiting relationships (see Chap. 2). While the rise of cohabitation is contributing to changing patterns of divorce, the contribution of cohabitation to overall rates of relationship dissolution is not captured by official divorce statistics. Previous Australian and overseas research has indicated that cohabiting relationships tend to be less stable than marital relationships (Qu et al. 2009), but we know little about the pattern and nature of the differences in dissolution between the two types of relationships. To better capture the extent of relationship dissolution in Australia from both cohabiting and marital relationships, we need survey data.

The majority of previous research on cohabitation and relationship dissolution has concentrated on the dissolution of marriage after a period of cohabitation. Most studies find that a period of cohabitation prior to marriage increases the risk of subsequent divorce (Bennett et al. 1988; Teachman and Polonko 1990; Axinn and Thornton 1992; DeMaris and Rao 1992; Bracher et al. 1993; Hall and Zhao 1995; Lillard et al. 1995; Berrington and Diamond 2000; Dush et al. 2003; Hewitt et al. 2005). Far fewer studies have investigated the dissolution of cohabiting relationships that do not proceed to marriage (see Schoen 1992; Thompson and Collela 1992 for notable exceptions).

In this chapter we are not only interested in what happens after marriage (preceded by cohabitation or not), but also in what happens with cohabiting relationships that do not proceed to marriage. There are three potential pathways cohabiting relationships can follow: couples can continue to cohabit, become legally married or separate (Qu et al. 2009). To investigate relationship dissolution among cohabiting and marital relationships, we differentiate between three mutually exclusive relationship groups, those who are: (1) married without prior cohabitation, (2) cohabiting only, and (3) married after a period of cohabitation.

Table 5.2 Relationship type and outcome (column per cent) for relationships formed between 1995 and 2010 (HILDA 2001–2010[a])

Relationship type	Remained in relationship (%)	Relationship ended (%)	Total (%)
Married	21.7	8.9	19.3
Cohabiting	36.1	69.3	42.3
Cohabiting-Married	42.2	21.8	38.4
Total %	100.0	100.0	100.0
Number	1,269	293	1,562

[a]See Appendix 5.1 for description of the data set up and sample used for this table

So that we are not comparing cohabiting relationships with long-term marriages we restrict our examination to first marriages only and to relationships formed since 1995. Our sample is respondents in HILDA Waves 1–10 (2001–2010).

In Table 5.2 we show the overall proportion of respondents in the abovementioned three relationship groups, for relationships commencing between 1995 and 2010. The final column in the table provides the total proportion of each relationship type observed over that time. The most common relationships were cohabitating only relationships (42 %), followed by cohabitations that resulted in marriage (38 %), with the fewest number of people marrying directly (19 %). The small proportion of those marrying directly is consistent with ABS data indicating that the proportion of people cohabiting prior to marriage has increased from 67.2 % in the late 1990s to 78.2 % in 2011 (ABS 2007, 2012c). The middle column of the table indicates that the majority (69 %) of the relationships that ended in HILDA between 1995 and 2010 were cohabiting only relationships.

While this information provides us with a summary of relationship dissolution across these relationship groups, there are a number of limitations to this approach when examining relationship dissolution. Relationship dissolution is a time-dependent event (Heaton et al. 1985; Heaton 1991; Heaton and Call 1995), where the risk of dissolution may increase or decrease over the duration of the relationship. To better understand the nature and extent of differences in the time dependency of relationship dissolution for these relationship types, we use retrospective and prospective relationship information from the first 10 waves of HILDA.

We examine relationship survival and the hazards of dissolution over the first 15 years of the relationship, restricting our analyses to relationships formed after 1995. First we examine the survival function, which tells us the proportion of respondents surviving relationship breakdown at each year. Figure 5.6 plots the survival function for separation from first marriages, cohabiting relationships and first marriages preceded by cohabitation in the sample. The 15-year survival of first marriages formed since 1995 in our sample is 92.6 %, and the first 5 years of marriage for this group are very stable. This differs from previously published Australian research on marriage dissolution (see Hewitt et al. 2005: 173), which indicated that approximately 82.8 % of marriages survived the first 15 years and that many marriages ended within the first 5 years. However, the previous study included marriages that
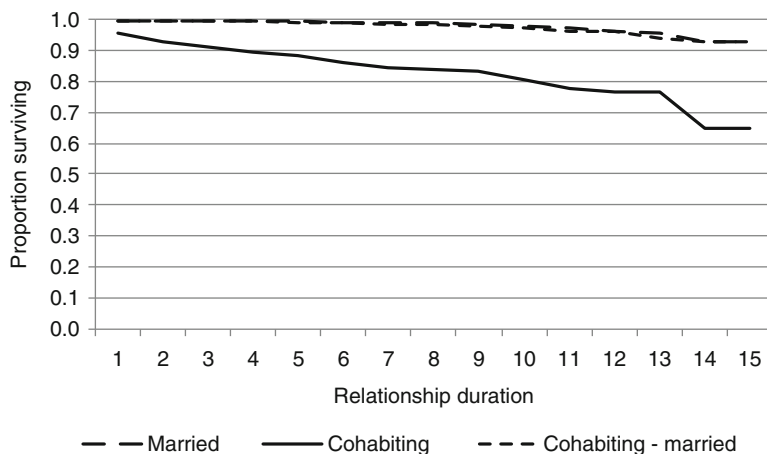
Fig. 5.6 Fifteen-year survival of de facto cohabitations and first marriages formed after 1995 (HILDA 2001–2010, see Appendix 5.1)

had formed in the 1930s and 1940s when divorce and cohabitation were rare, as well as marriages that were formed in the 1960s and 1970s when cohabitation was relatively rare, but divorce was increasing. Thus the earlier figures represented an average over all marriages irrespective of the year of marriage. The results here suggest that for more recent marriages formed since 1995, early marriage is relatively stable.

The 15-year survival of marriages preceded by cohabitation is marginally higher at 93.1 % than of those not preceded by cohabitation. Finally, Fig. 5.6 shows that cohabiting relationships that have not proceeded to marriage have much lower survival rates at all relationship durations, with very small numbers of cohabiting relationships reaching 15 years duration (numbers not shown) and only 64.7 % of these relationships surviving at 15 years duration.

An alternative way of looking at the timing of relationship dissolution is the hazard rate. The hazard rate represents the likelihood of experiencing relationship dissolution given that the relationship did not end in the previous year (Yamaguchi 1991: 9). In other words the hazard indicates the proportion of relationships that ended in separation for each time interval, given that the respondent was still in their relationship at the previous time interval. In Fig. 5.7, the hazards of relationship dissolution for each group are presented. The graph shows that the hazards of relationship dissolution are similar for those who are married with or without a period of cohabitation and are relatively low. There is an overall trend of increasing hazard of dissolution over time, with marriages preceded by cohabitation having a slightly elevated risk of dissolution over the 12 years of relationship duration. However, additional analysis indicates that there were no significant differences in the hazards of relationship dissolution for direct marriages and marriages preceded by cohabitation. This finding is consistent with recent research that suggests the increased risk of divorce for those who cohabited before marriage has diminished or
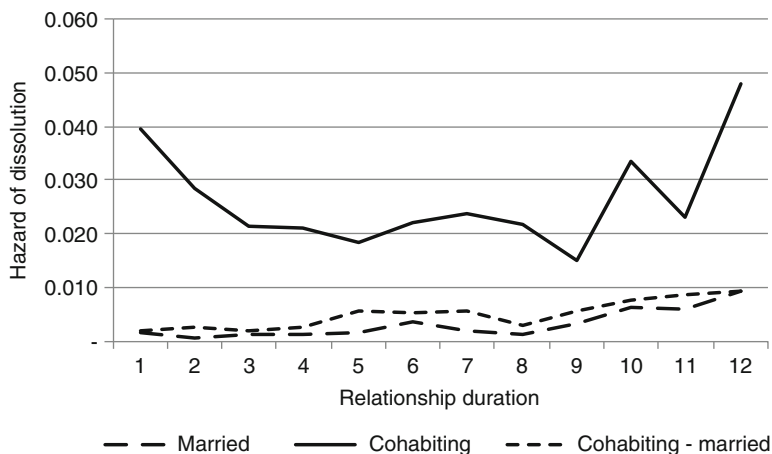
Fig. 5.7 Hazards of relationship dissolution for cohabiting and first marriages formed after 1995, HILDA 2001–2010 (see Appendix 5.1)

disappeared for younger cohorts (Klijzing 1992; Schoen 1992; de Vaus et al. 2005; Hewitt and de Vaus 2009).

Figure 5.7 also shows that cohabiting relationships that do not proceed to marriage have a higher likelihood of dissolution at all relationship durations. The U-shaped pattern of likelihood of dissolution from cohabitations is very different from the gradual increase for those who married (either with or without a period of cohabitation). The U-shape distribution indicates the likelihood of dissolution in the first couple of years of a cohabiting relationship is very high, then stabilises once the relationship reaches 3 years in duration and increases quite dramatically again after 10 years. It should be noted that the number of cohabiting relationships at 10 years was relatively small and therefore the hazard estimates are less reliable. Therefore these results for cohabitations of longer durations should be treated with some caution. We restrict Fig. 5.7 to 12 years' relationship duration.

These patterns of relationship dissolution for marital and cohabiting relationships formed since 1995 in HILDA are interesting for their departure from patterns recorded by previous generations and the ways in which they reflect more recent trends in relationship formation. Many couples use cohabitation as a 'trial' marriage (Seltzer 2000; Manning and Smock 2002; Qu et al. 2009). It appears that many of the marriages that might once have ended in the first few years of marriage may have been replaced by cohabiting relationships. This has resulted in a lower risk of divorce early in marriage for more recent marriage cohorts than in previous marriage cohorts. As in previous generations, Australians continue to form relationships that are relatively unstable in their early years, but in more recent generations those relationships are less likely to be legalised with marriage.

5.5   Why Is Cohabitation Less Stable?

With the increase in cohabitation as either a prelude or alternative to marriage, a large and growing body of work comparing and contrasting cohabitation and marriage has emerged. Understanding differences between couples that choose to cohabit or marry is important for explaining why cohabiting relationships tend to be less stable. Arguably, the most prominent recent explanation for differences between cohabiting and married couples is *commitment theory*. According to commitment theory the motivation for cohabiting rather than marriage is based on a lack of personal dedication to a partner and constraint commitment (Stanley et al. 2004).

Personal dedication refers to interpersonal commitment associated with a strong desire for the relationship to last into the future (Rhoades et al. 2011). Some research indicates that cohabiters as a group tend to value individual freedom more than their married counterparts (Axinn and Thornton 1992; Thompson and Collela 1992). Other research finds that cohabiters tend to have lower levels of relationship commitment and fewer moral constraints to stay in their relationship than married couples (Nock 1995; Brown and Booth 1996). These differences suggest that cohabiters have lower levels of interpersonal commitment to their partner and to being in a relationship than married people.

Constraint commitment refers to the costs of ending or leaving a relationship including financial constraints (i.e. access to income, home ownership), social pressure and concerns for children (Stanley et al. 2006: 503). Overall, cohabiting relationships have lower levels of constraint commitment, in that partners are more likely to keep their money separate (Vogler et al. 2006), less likely to own a house together (Mulder and Wagner 2001; Baxter and McDonald 2004) and less likely to have children in the relationship (ABS 2012a); although it should be noted that a significant number of children are now being born to couples who are not married.

Interestingly, this argument also highlights the fact that the transition from cohabitation to marriage may not necessarily indicate a greater level of interpersonal commitment. Rather, once involved in a longer term cohabiting relationship, the costs of leaving may be a more important determinant of the stability of the relationship or the transition to marriage than personal dedication to one's partner (Stanley et al. 2006). Some long-term cohabiters with high levels of constraint commitment, such as children or co-ownership of a house, resemble married couples. For example, Willets (2006) finds that long term cohabiting relationships with high levels of constraint commitment have similar levels of relationship quality to marital relationships. However, long-term cohabiting relationships of a highly committed nature are still relatively rare (Kiernan 2002; Seltzer 2004; Qu et al. 2009).

This research suggests that, overall, cohabiting couples have lower levels of dedication to the relationship with their partner and fewer structural constraints to ending the relationship when compared to married couples. These factors are likely to strongly influence decisions that partners make about whether to remain in the relationship or to end the relationship. Using the Generations and Gender Survey (see Sect. 7.3.1) to compare and contrast cohabiting and married couples across

eight European countries (Bulgaria, France, Germany, Hungary, Norway, Romania, Russia, and The Netherlands), Wiik et al. (2012) find that cohabiters are more likely to have plans to break-up than married couples.

5.6 The Consequences of Relationship Dissolution

Of primary concern to researchers and policy makers are the consequences of relationship dissolution for individuals, families and children. The growth in marriage breakdown is significant because there are substantial short and medium term, social, psychological and economic costs for spouses and children (Amato 2000), as well as very significant costs to the national economy (Australian Parliament House of Representatives Standing Committee on Legal and Constitutional Affairs 1998). Marital dissolution is not only an emotionally stressful event for individuals, but results in changes in many areas of life including employment, household income, and household composition (Wood et al. 2007). Despite the dramatic rise in cohabitation, and the instability of cohabiting unions, few studies have investigated the consequences of relationship dissolution for those in cohabiting compared to marital unions.

While cohabitation seems to offer some similar advantages to marriage, the important differences outlined in the previous section suggest that when relationships end we might expect that separating from cohabitation may have less impact on people's lives than separating from marriage. Two outcomes that have been investigated are the consequences of relationship dissolution for income and health and wellbeing.

5.6.1 Income

Previous research in Australia (Smyth and Weston 2000), the United States (Bianchi et al. 1999) and Europe (Poortman 2002; Uunk 2004; Aassve et al. 2007; Andreß and Bröckel 2007) finds that men do better financially after separation than women. Typically after marital separation men's household income remains relatively stable and women's decreases (Andreß and Bröckel 2007). These differences are likely due to gender differences in changes in household composition combined with gender differences in earnings. For men, the average number of people in their household diminishes after relationship dissolution as they are less likely to have primary responsibility for the care of children, but their household income does not decline dramatically as men typically contribute the majority share to household income before the relationship ends (Bianchi et al. 1999; Smyth and Weston 2000). In contrast, women's household size decreases less after relationship dissolution because they are more likely to have greater care responsibilities for children, but their household income decreases more dramatically as they tend

to contribute less to household income. We know little about what happens when cohabiting relationships break down.

To compare and contrast the consequences of relationship dissolution from cohabiting and marital relationships we use a measure of household income that includes any tax transfers, government benefits, private transfers (such as the payment of child support) and income from salary, wages, and business. We use this measure as it captures the total income available in the household for consumption or savings. We also equivalise our income measure because the financial needs of households change with each additional member, and equivalised income better captures people's actual standard of living as it takes household composition into account. Due to large gender variations in the household composition of spouses after separation the most appropriate measure of household income is equivalised household income. In the HILDA Waves 1–10 sample we found that women who separated from marriage had the largest average household size after separation (2.4 persons) and cohabiting men who separated had the smallest (1.01 persons) while women who separated from cohabiting relationships (1.7 persons) and men who separated from marriage (1.5 persons) were in between.

In Fig. 5.8, we show the predicted equivalised household income for men and women after separation from marriage and cohabitation. We plot equivalised household income at three time points: in the year prior to relationship dissolution; in the year of dissolution and in the year after dissolution. In the left panel we present the predicted equivalised income for men. The graph shows that men's equivalised household income increased after separation. There were no differences in the household income of men who were married compared to men who were cohabiting before or after relationship dissolution. The picture for women is quite different. Not surprisingly women in cohabiting and marital relationships have similar equivalised household incomes to men. After relationship dissolution, however, cohabiting women's

Fig. 5.8 Equivalised annual household income after separation from cohabitation and marriage, by gender (HILDA 2001–2010) (Models control for union duration, age, employment status and highest level of education. See Appendix for more information on modelling approach used (Hewitt and Poortman 2010))

equivalised household income increased in a similar pattern to that for men. In contrast, equivalised household income for women who separated from marital relationships remained stable and was not significantly different from equivalised household income when they were married.

The main finding that cohabiting women have a stronger financial position after separation than married women is consistent with previous research in two main ways. First, cohabiting women tend to contribute a higher share of household income during the relationship than married women (Kalmijn et al. 2007). Second, couples in cohabiting relationships are less likely to have children than couples in marital relationships (Hewitt et al. 2010), and therefore cohabiting women are less likely to have dependent children to care for after separation. Even though a significant proportion of children are currently born in cohabiting relationships, the majority is born within marital relationships. Together these two factors likely contribute to the stronger financial position of cohabiting women than married women after separation.

5.6.2   Health

It is well documented that intimate relationships are important to health (Carr and Springer 2010). A large number of studies spanning decades show that, compared to being unmarried, being married is associated with better physical and mental health and well being (Gove and Shin 1989; Wade and Pevalin 2004; Williams and Umberson 2004; Willitts et al. 2004; Strohschein et al. 2005; Bennett 2006; Zhang and Hayward 2006) and lower rates of mortality (Grant et al. 1995; Nagato et al. 2003; Brockman and Klein 2004; Dupre et al. 2009). A handful of studies have compared the health profiles of people in marital and cohabiting relationships, and the findings of these studies are mixed. In general no differences are found in the physical and mental health of cohabiting versus married people (Horwitz and White 1998; Wu et al. 2003); if differences are found cohabiters tend to have poorer health than married couples (Brown 2000).

People who are separated, divorced or widowed have worse health than their partnered or never-married counterparts (Bierman et al. 2006; Wood et al. 2007), which suggests that marital loss may be particularly consequential for health. Far fewer studies have investigated what happens to health when cohabiting relationships end. While cohabitation seems to offer some similar health advantages to marriage, there are some important differences in the experiences and conduct of cohabiting relationships that may indicate differences in the health consequences of ending such relationships; although the scant evidence to date suggests that there are no differences in the health consequences of separation for married and cohabiting couples (Wu et al. 2003).

We examine the consequences of relationship dissolution from cohabiting and marital relationships for physical and mental health. Figure 5.9 shows the physical health consequences of separation for men and women from marital and cohabiting relationships. For men, there were no physical health differences by union type or stability, although the graph suggests a decline in health for cohabiting men leading
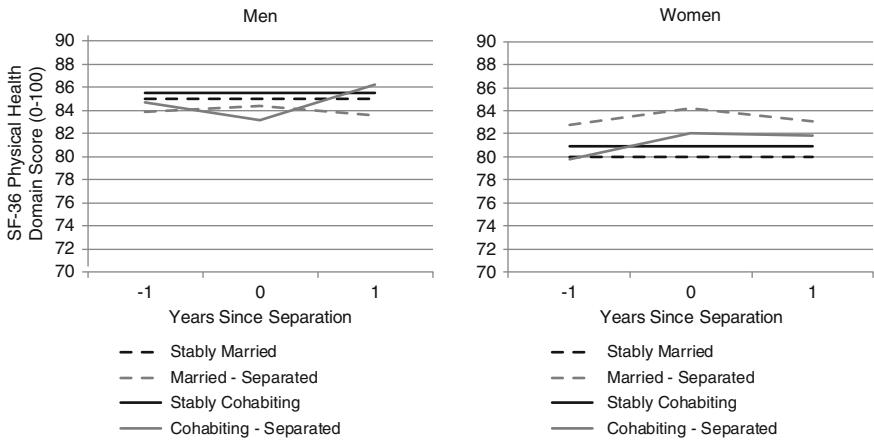
Fig. 5.9 Physical health (SF-36) after separation from cohabitation and marriage, by gender (HILDA 2001–2010) (Models control for relationship duration, age, number of children under 18 in the household 50 % or more of the time, household income, employment status, highest level of education and health status at the previous wave. See Appendix 5.1 for more information on modelling approach used (Hewitt et al. 2012))
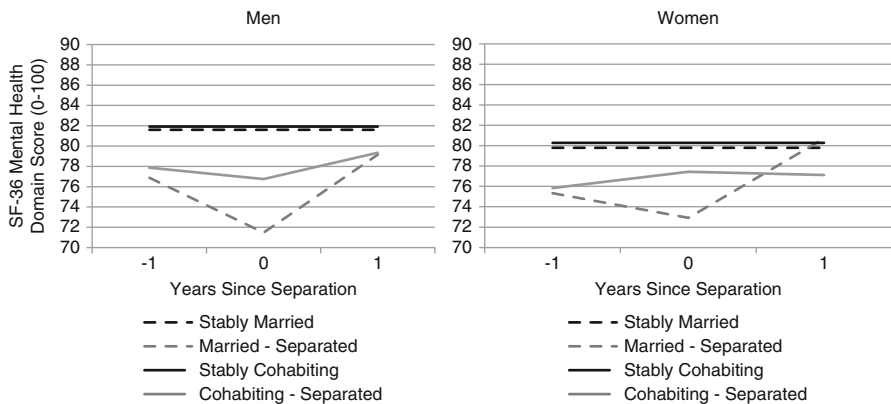

Fig. 5.10 Mental health (SF-36) after separation from cohabitation and marriage, by gender (HILDA 2001–2010) (Models control for relationship duration, age, number of children under 18 in the household 50 % or more of the time, household income, employment status, highest level of education and health status at the previous wave. See Appendix 5.1 for more information on modelling approach used (Hewitt et al. 2012))

up to separation, followed by a return to previous health levels by one year after separation. For women, those who separate from cohabiting or marital relationships have a small improvement in their physical health (although physical health scores are similar to those recorded before the relationship ended).

In Fig. 5.10, we show the mental health consequences of relationship dissolution for men and women in cohabitation and marital relationships. These graphs show similar patterns for men and women. First, those who experienced separation

from a relationship had poorer mental health before and after the transition. This is consistent with previous research which suggests that prior to a relationship ending men and women experience low levels of relationship quality which negatively affect mental health (Kalmijn and Monden 2006). Second, the results indicate that the mental health consequences of separation from marriage are significantly worse than for separation from cohabitation. Finally, we see that within a year or two after separation, mental health has recovered to levels similar to those recorded prior to separation, and for women are slightly higher than prior to separation. Thus the consequences of relationship dissolution for mental health also appear to be short-lived.

These results indicate that relationship dissolution has a stronger and more negative association with mental health, though not long-lasting, than for physical health. There are also clear negative mental health implications for those separating from marriage compared to those separating from cohabiting relationships, and these findings are consistent for men and women. There are, however, some important gender differences for household income. For men, equivalised household income improves and there are no differences in the consequences of relationship dissolution for men who are cohabiting or married. In contrast, married women have a much lower equivalised household income after separation than cohabiting women after separation. On balance, our results suggest that separation from cohabitation has far less severe consequences for finances and health than separation from marriage.

5.7   Discussion

The goal of this chapter was to illustrate continuity and change in the nature of relationship dissolution in Australia and to provide insights into recent trends and outcomes. Over the last century in Australia divorce has gone from being virtually non-existent to becoming a common feature of family life by the mid-1970s (Hewitt et al. 2005). While this sparked a moral panic about a crisis in 'the family' late last century, there is little evidence that such a crisis has occurred. Since the early 1980s the rate of divorce has slowed, stabilised and from the year 2000 is showing a slight decline. In addition, the nature and characteristics of divorcing couples continue to change, with increases in the median age at divorce and time to divorce and decreases in the proportion of divorces involving children. These trends are consistent with the stabilisation of the overall rates of divorce and suggest that fewer children are being affected by divorce now and in the future. However, marriage has also transformed and one factor that may partially explain these trends in the legal dissolution of marital relationships is the increasing number of cohabiting relationships that are not captured in official statistics. This suggests that some unstable marriages have been replaced by cohabitations.

Using data from the HILDA survey we compared and contrasted the stability of married and cohabiting relationships. Consistent with broader trends shown by official statistics, which indicate that marriage has stabilised, we find that marriage, and

in particular early marriage, is relatively stable. In contrast, our examination of cohabiting relationships provides good evidence that Australians are not necessarily experiencing relationship dissolution at lower rates than in the past. In fact, if anything, they are possibly experiencing higher rates of overall relationship dissolution, but in cohabiting relationships rather than marriage.

It is well documented that on average the nature and circumstances of cohabiting relationships differ from those of marriages (Stanley et al. 2004). These differences, such as lower average levels of emotional as well as structural commitment amongst cohabiters, provide strong insights into why cohabiting relationships are less stable. These differences also suggest that in the case of relationship dissolution the consequences for cohabiters may be less severe. However, few studies have tested this idea. In this chapter we contrasted the financial and health consequences of relationship dissolution for cohabiters compared to those who are married. We find that while relationship dissolution does tend to have a negative impact on financial and mental well being, the consequences are stronger for married people.

These results on the consequences of dissolution for cohabiters and married respondents in Australia are not entirely consistent with previous research in the field. We find significant mental health differences for cohabiting and married respondents who experience relationship dissolution, but a Canadian study found no significant differences in the mental health consequences of relationship dissolution for married or cohabiting respondents (Wu and Hart 2002). We also find that married women fare significantly worse financially than cohabiting women after separation, even though the financial position of married women after separation relative to their position prior to separation is not significantly worse. Previous Australian research suggests that this is largely due to the flow of government transfers into separated women's households (Hewitt and Poortman 2010). However, a US study using the Longitudinal Survey of Youth concludes that women whose cohabiting relationships end have similar financial standing as previously married women (Avellar and Smock 2005).

The overall picture of relationship dissolution in the Australian context, provided by this chapter, is relatively positive. Officially, the trends suggest more stable and potentially lower divorce rates in the future. Even though Australians are experiencing high rates of relationship dissolution from cohabiting unions, the evidence presented here suggests that the emotional, social and financial effects of separation from cohabiting relationships are less severe than they are from marriages. Most couples whose relationships end are able to progress with their lives and those with children often renegotiate their post-separation relationship in positive ways (Funder 1996; Smart and Neale 1999; Smart 2000). Nevertheless in the short term there are major social, emotional and financial implications for both men and women experiencing relationship dissolution from cohabitation and marriage (Amato 2000). It is thus important to maintain social and financial supports for Australian couples who have experienced relationship dissolution, whether from cohabitation or marriage, and to continue to monitor trends and outcomes given the rapid rate of change in patterns of family formation and dissolution.

Appendix 5.1: Methodological Notes

The data used to examine dissolution from cohabiting relationships came from the first ten waves of The Household, Income and Labour Dynamics in Australia (HILDA) survey, collected between 2001 and 2010 (see Technical Appendix).

The sample for Table 5.1 included all respondents at wave 1 who indicated that they had married. The analysis was restricted to those in their first marriage as the processes of divorce surrounding remarriages are very different from those of first marriages (Carmichael et al. 1997; Sweeney 2010). Retrospective marriage history data were used. As only first marriages are under consideration in this analysis, if a respondent had married once the information about their *present* marriage was included in the calculation of the dependent variable. If the respondent had been married more than once then information about their *first* marriage was included but not information about subsequent marriages.

The sample for Table 5.2 and Figs. 5.6 and 5.7 includes respondents who formed a cohabiting or marital relationship between 1995 and 2010. Prior to 2000 retrospective relationship history data are used, and after 2000 panel data were used. If a respondent had formed more than one cohabiting relationship during that time we included their most recent or current cohabiting relationship. We restricted the marriage sample to those who entered their first marriage only. People who were cohabiting after marriage were also excluded from the analytic sample. To capture the main relationship processes identified by previous research (Qu et al. 2009), we differentiated between marriages, cohabitations that ended in marriage and cohabiting only relationships.

The sample for the analysis presented in Figs. 5.8, 5.9 and 5.10 includes all respondents in HILDA waves 1–10 who were married or cohabiting at wave 1 or who married or started cohabiting during the panel. We follow them over the panel and observe those relationships that end in separation. The model for Fig. 5.10 includes controls for relationship duration, age, employment status, highest level of education, and number of children in household 50 % or more of the time. The models for Figs. 5.9 and 5.10 include a range of basic controls including relationship duration, age, number of children under 18 in the household 50 % or more of the time, household income, employment status, highest level of education and health status at the previous wave.

Given that we had repeated observations on individuals over time, the structure of our data violates the assumption of independent observations and ordinary least squares regression would not be appropriate. Instead we used a linear fixed-effects model to account for clustering of observations by individual and control for between individual variation (Singer and Willett 2003). This approach is also appropriate for unbalanced panels. The fixed-effects model controls for unobserved heterogeneity because it produces estimates that are net of all observed and unobserved differences between individuals that are time-invariant. Models were estimated using the fixed effects option in *xtreg* in STATA 11.2 (StataCorp 2012).

For the results presented in Fig. 5.8, we use equivalised disposable annual household income as our main dependent variable. Our income measure was equivalised using the OECD-modified equivalence scale (Organisation for Economic Co-operation and Development 2008). In this approach the first adult within the household is assigned a value of 1, a value of 0.5 is assigned to each additional adult member (aged 15 or over) and a value of 0.3 is assigned to each child. We used this scale as it is the equivalence scale considered best suited to the Australian situation by the ABS (Australian Bureau of Statistics 2006). Preliminary analyses showed that using alternative equivalence scales, such as dividing income by the square root of the number of household members, did not lead to different conclusions. In addition we excluded extreme outliers on household income; respondents who reported a household income (not equivalised) of more than $300,000 AUD each year.

For Figs. 5.9 and 5.10 we used the mental and physical health domain measures derived from the Short-Form 36 (SF-36). The SF-36 is a self-completed measure of health status comprising 36 items that measure two main health domains as well as eight health constructs and is a well-validated tool for measuring population health (McHorney et al. 1993; Butterworth and Crosier 2004). For physical and mental health domains, scale scores ranged from 0 to 100, where lower scores indicated poor health and higher scores indicated excellent health (Ware et al. 2000).

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Chapter 6
Repartnering

Edith Gray

6.1 Introduction

Following the chapter on relationship dissolution, this chapter examines repartnering over a 10-year period. Many people who have experienced relationship breakdowns go on to have new relationships. Repartnering can be defined as forming a new intimate relationship after the dissolution of a previous one, and can take a number of forms. This is because of the widespread changes in the types of relationships available to people in Western-industrialized countries like Australia. Until the 1970s, repartnering almost exclusively took the form of remarriage.

Non-marital cohabitation was evident at low levels in the 1971 (0.6 % of families) and 1976 censuses (2.2 % of families) (Saratankos 1983). Over the last 30 years this has increased considerably, with around 11 % of adults living in a cohabiting relationship in 2009–2010 (ABS 2012a). As discussed in Chap. 2, these relationships include cohabitation without marriage, cohabitation followed by marriage, and cohabitation after relationship dissolution. This increase in cohabitation, and its varying forms, is important to consider in this chapter on repartnering in Australia. To date, a substantial amount of research has considered remarriage, but little focuses on repartnerships in the context of the contemporary trends in relationship formation.

This chapter starts with a literature review and provides a theoretical lens that incorporates individual histories and social context for investigating repartnering. This is followed by a description of the data used to measure repartnering over a 10-year period. The analysis presented will be based on the retrospective and prospective longitudinal information available from the Household, Income and Labour Dynamics in Australia (HILDA) survey (2001–2010). These data provide

E. Gray (✉)
College of Arts and Social Sciences, Australian National University, Canberra, Australia
e-mail: Edith.Gray@anu.edu

an opportunity to incorporate past relationships, family and fertility histories with current socio-demographic characteristics into understanding patterns of repartnering. The main emphasis of the results of this chapter will be on 'who, when and how' people repartner.

6.2   Repartnering Pathways

In countries like Australia which have experienced a second demographic transition, repartnering takes the form of both remarriages and cohabiting partnerships, but also 'living apart together' (LAT) relationships (see Chapter 2). Lesthaeghe (1995), in his discussion of second demographic transition theory, argues that remarriage probabilities may decline, but that alternative repartnership forms such as cohabitation and LAT relationships will increase. It has also been noted that repartnering is becoming increasingly important because of relatively high divorce rates as well as increases in the percentage of cohabiting relationships that break up (de Vaus 2004).

Given the importance of both divorce, and cohabitation breakdown, there are now four discernible pathways of repartnering (Fig. 6.1). These can be illustrated as follows:

These pathways can be described as: (1) consecutive marriages; (2) cohabitation with a new partner following a marriage; (3) marriage to a new partner following cohabitation with another partner; and (4) consecutive cohabitations. Widowhood is another potential pathway into repartnering, and although occurring across all ages, is most likely to affect those aged 60 years or more. In that age group, the repartnering rate is 9.9 per 1,000 for men and 2.0 per 1,000 for women in 2011 (ABS 2012b).

National statistics provide information on remarriage rates and age at remarriage over time. While these statistics cannot provide information on patterns 2, 3, or 4, a substantial number of repartnerships fall into pattern 1. Overall, marriage is still more
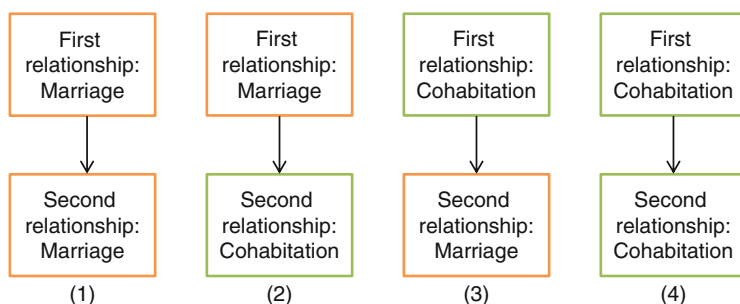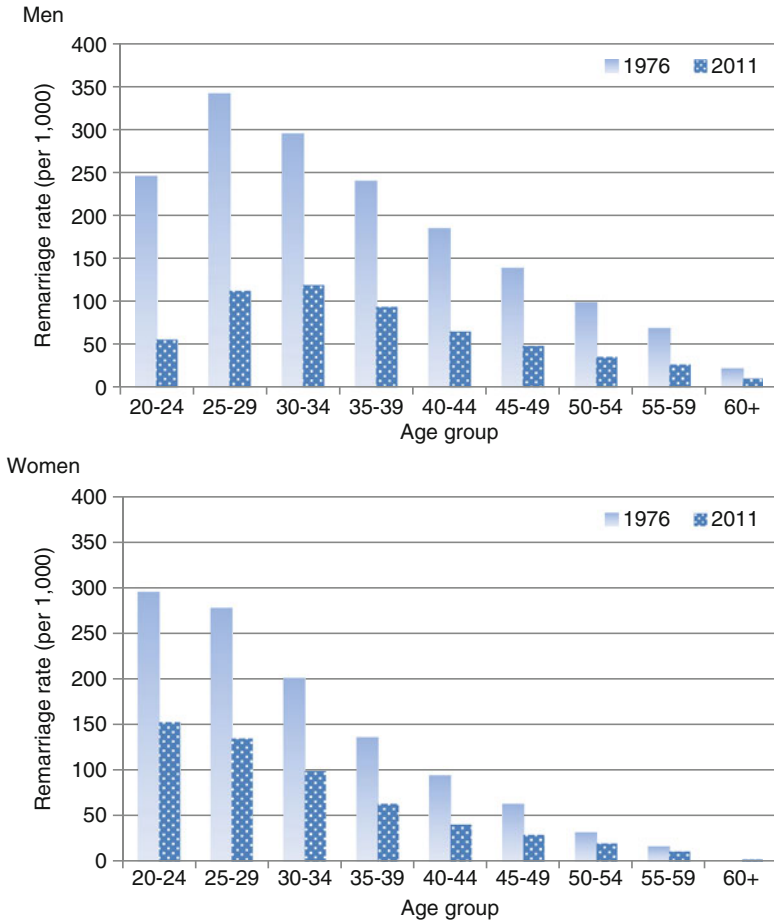

Fig. 6.1 Repartnering pathways

Fig. 6.2 Remarriage rates, men and women, 1976 and 2011 (ABS 3310.0 various years and online Census table builder 2011)

common than cohabitation, although a different pattern is evident for those who are repartnering: the results presented in this chapter show that people may be more likely to opt for pattern 2 (divorce followed by cohabitation) than pattern 1. Nevertheless, these official statistics provide details on remarriage trends that predominated in the past, even though post-marriage cohabitation is more common now.

Figure 6.2 shows the substantial decline in remarriage rates over the period 1976–2011. At both times, remarriage rates were much higher for women and men in the prime marriage age groups than for older age groups. In 1976, remarriage rates were higher for men than for women in all age groups except 20–24 years, which is due to
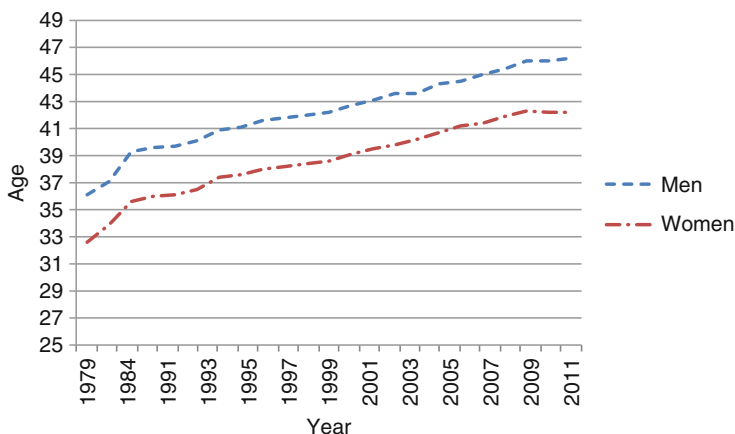
Fig. 6.3 Median age at remarriage, men and women, 1979 to 2011, Australia (ABS 3310.0, various years)

women marrying earlier than men. In 2011 there is not such a dramatic difference between age groups, although there is a clear downward trend at the older ages.

This general flattening of remarriage rates over the period is also evident in the increase in the median age at remarriage. Figure 6.3 provides the median age for men and women from 1979 to 2011. This pattern also reflects the general increase in median age at marriage over the same period (see Chap. 3).

6.3   Factors Associated with Repartnering

Repartnering is an opportunity to embark on a new stage of life with a new partner, and as described, it can take the form of either remarriage or cohabitation. To date, there has been little written on who repartners, the timing of repartnering, and whether people get married or cohabit when repartnering in Australia.

Some notable exceptions include the study by Weston and Khoo (1993) who looked at both cohabitation and remarriage of divorced parents over a three year period, de Vaus (2004) who provided detailed statistics on remarriage for the divorced and widowed, and Skew et al. (2009) who compared repartnering in the UK and Australia. De Vaus' report found very large differences in the likelihood of remarrying between people who were divorced and those who were widowed, with the divorced much more likely to remarry than those who were widowed. He further found that the gap between men and women in median age at remarriage was greater than that for first marriage, and further that men were more likely to remarry than women. Weston and Khoo, whose study was based on parents, also found that men were more likely to repartner, and repartner faster than women.

Despite the relative paucity of research on remarriage or repartnering in Australia, there is a vast amount written – particularly about remarriage – from North America

and Europe. It is important to acknowledge that most of this research focuses on remarriage, even though in many countries the majority of second unions take the form of cohabitation (e.g. Wu and Schimmele 2005 for Canada). Most of the research on remarriage has focussed on understanding socio-demographic factors. However, person histories are also important, and I argue that previous relationships and childbearing histories matter in terms of understanding repartnering. Coleman and Ganong (1990) in their 1980s decade review found that few studies included prior relationship history, a sentiment echoed by Poortman (2007). Sweeney (2002, p. 411) expressed surprise at this omission in the literature given that much research on family transitions is based on a life-course approach, which typically takes into account past experiences. Cherlin provides one explanation. In his review of the first decade of the twenty-first century, he noted that family demographers 'moved further away from the framework of a conventional, uniform family life cycle' (2010, p. 403). He attributed this to the increasing divergence in family patterns, often attributable to disadvantage (education and income), as a reason for rethinking what affects family processes like family formation and dissolution.

In previous research, my co-authors and I argued that both individual life experiences and socio-demographic background influence repartnering by: (1) affecting a person's own behaviour or attitude towards forming a new union, and (2) affecting their attractiveness as a potential partner to others (Skew et al. 2009). This is a similar framework to that used by Ivanova et al. (2013) who refer to need, attractiveness, and opportunity. These concepts will be used to provide context for the factors that have been found to be associated with repartnering (remarriage).

6.3.1 Age and Gender

Age and gender are inextricably related when it comes to patterns of repartnering. Age is often used in demographic research, not just as a measure of chronological age, but potentially also of generational differences in attitudes toward repartnering. It has been found that people who end their relationships at younger ages are more likely to remarry than people who end their relationships at older ages, and this holds for both men and women (de Vaus 2004). However, the pattern is much stronger for women.

Overall, women are less likely to repartner than men (Poortman 2007; Wu and Schimele 2005), but there is a much greater difference at later ages. One explanation is that men are more likely to be involved in the labour market at these ages than women, and work is a common way to meet people (de Graaf and Kalmjin 2003). It has also been argued that the marriage market plays a role here (Dean and Gurak 1978). As women tend to marry men who are a few years older than themselves, over time women's pool of potential partners diminishes faster than men's. This is also associated with greater longevity for women; hence women are more likely to experience widowhood than men.

6.3.2 Previous Unions

As described above, some past studies have lacked information on previous unions, such as duration of the previous relationship. However, there are studies that included this type of life course measure, including several from the latter years of the 20th century (Bumpass et al. 1990; Koo et al. 1984; Mott and Moore 1983). The main finding from these studies was that relationship duration had little effect on the likelihood of repartnering. More recent studies show that length of previous relationship is positively associated with repartnering (De Graaf and Kalmijn 2003; Poortman 2007; Wu and Schimmele 2005).

6.3.3 Children from Previous Unions

An important contribution to the literature on repartnering is a recent paper by Ivanova et al. (2013). As mentioned, this paper discusses why children might affect repartnering, and focuses specifically on the concepts of need, attractiveness, and opportunity. The authors argue that these concepts provide a theoretical position for explaining how children can affect repartnering. In sum, they find that childless men and women do not differ in the probability of repartnering, and that these findings hold across different institutional and cultural settings. Further, as children age, the chances of entering a new union increase.

This paper is useful for a number of reasons. Firstly, the effect of children on repartnering is a specific focus, although this is not necessarily unique to that paper. Other studies that specifically account for the role of children include: Bernhardt and Goldscheider (2002), Koo et al. (1984), Lampard and Peggs (1999), Stewart et al. (2003), Teachman and Heckert (1985).

Secondly, the paper does not only focus on the effect of children on women's repartnering. A number of recent papers include the effect of children on men's repartnering (Bernhardt and Goldscheider 2002; Goldscheider and Sassler 2006; Skew et al. 2009; Stewart et al. 2003). The results of past fertility seem to differ for men and women. Although the presence of children is consistently found to be associated with lowering repartnering rates for women, for men the effect is more mixed and not always significant (De Graaf and Kalmijn 2003).

Thirdly, Ivanova et al. (2013) provide a framework with three dimensions for considering the effect of children: needs, attractiveness, and opportunities. For example, mothers without a partner may have an economic need to repartner and may form new partnerships as a strategy to relieve pressure on their households (Duncan and Hoffman 1985; Smock 1990; Weston and Khoo 1993). However, most research has found that the presence of children from prior relationships has a negative effect

on repartnering (Coleman et al. 2000). The chance of forming a new union decreases as the number of children increases.

Bumpass et al. (1990) argue that having children from a previous partnership may decrease one's attractiveness as a partner due to its association with various costs, both direct financial costs and indirect costs associated with the complexities of step-families. This illustrates Ivanova et al.'s second concept: attractiveness. And lastly, opportunity: the presence of children may act as a barrier to repartnering by decreasing the chance for social interaction and the possibility of finding a new partner (de Graaf and Kalmijn 2003; Ermish et al. 1990; Wallerstein and Blakeslee 1989).

6.4   Data

This study uses Waves 1–10 of the HILDA survey, 2001–2010. Details on this household-based panel study are available in the Technical Appendix. In this chapter, the analysis is based on individual characteristics, and on the factors discussed previously. The research focuses on the respondent's socio-demographic characteristics (various measures), their previous relationship type, whether they have children, and religiosity.

Table 6.1 provides details on these measures for the analytical sample, that is, respondents who were observed for more than one wave of the survey, and who were observed to separate (and stayed separated) from their partner. The sample selection is described in further detail below.

The sample includes more women than men, a fairly evenly spread across the age ranges (although relatively fewer in the 50–59 year age group), fewer respondents who have completed university or secondary education than other levels of education, and more respondents who were married than previously cohabiting.

About 7 out of 10 respondents (67.9 %) did not repartner in the time they were observed. Respondents were much more likely to enter into a cohabiting repartnership than a marriage (27 % v 4 %). Of the 446 respondents who repartnered into cohabitation, one quarter were *subsequently* observed to have married their partners (N = 114).

6.4.1   Sample Selection

This analysis is based on a representative sample of Australians who have experienced relationship dissolution, and are observed over a period of up to 10 years to determine characteristics associated with repartnering. Hence, it is based on contemporary relationship (re)formation.

Table 6.1 Sample
descriptives: Individuals
included in event history
models of repartnering

	N	%
Sex		
Male	723	44.0
Female	920	56.0
Age (at dissolution)		
<29	334	20.3
30–39	419	25.5
40–49	387	23.6
50–59	183	11.1
60+	320	19.5
Importance of religion (at dissolution)		
Not important	878	53.4
Somewhat important	283	17.2
Important	312	19.0
Missing	170	10.35
Number of children (at dissolution)		
0	436	26.5
1	245	14.9
2	455	27.7
3	268	16.3
4	134	8.2
5+	105	6.4
Highest education level (at dissolution)		
University	270	16.4
Diploma or certificate	545	33.2
Year 12	257	15.6
Year 11 or below	571	34.8
Type of relationship which ended		
Marriage	988	60.1
Cohabitation	655	39.9
Repartnered or not		
Repartnered into marriage	78	4.7
Repartnered into cohabitation	446	27.1
Repartnered (relationship unknown)	4	0.2
Did not repartner	1,115	67.9
N	1,643	
Average number of waves observed for	3.17	

As the analysis follows people over time, respondents had to be observed for at least two waves between the periods of collection 2001–2010. There are a number of exclusions listed in Appendix 6.1. Respondents who experienced relationship dissolution were included in the sample up until they experienced a repartnership or were censored (that is, the final wave where they were observed but did not repartner). The final sample size is 1,643 respondents who were observed for a total of 6,506 person years. The average number of waves observed for was 3.17.

6.5   Method

I start by providing some indicators of the level of repartnerships by age in 2005, since this is the mid-point of the data collection period. The indicators provided are (1) percentage repartnered; (2) percentage married more than once; (3) percentage repartnered following death of partner and (4) percentage cohabited more than once.

The main analysis is based on descriptive survival analysis, followed by discrete-time event history analysis of those observed to have a relationship dissolution to determine the factors associated with repartnering.

Survival analysis is used to describe the timing to repartnering following relationship dissolution for both those previously married and those previously cohabiting. Overall levels of repartnering are provided, as well as disaggregating the new partnership by whether it is a cohabitation or marriage. This analysis is then compared for men and women. Given the striking findings of Ivanova et al. (2013) about the effect of children on the differential repartnering of men and women, time to repartnering is also analysed by whether respondents have children or not.

The analytical event history models are run separately for overall repartnering, repartnering through marriage, and repartnering through cohabitation. These models are run separately for men and women. There are some issues with sample size that affect the modelling of marriage for men, but results are available for overall repartnering and for cohabitation. Discrete-time event history models (or discrete-time hazard models) are appropriate when there are individuals who are 'right-censored', that is, respondents who have not experienced the event while under observation, but may still experience the event in the future. Standard statistical techniques such as logistic regression cannot handle censored data adequately, however discrete-time event history models simply apply standard logistic regression to person-period data, making the results quite easy to interpret (Singer and Willett 2003). Hence, the HILDA data have been set up as person-period data for this purpose.

Three models are run, separately by sex, which include duration of last relationship, type of relationship that ended, age (time varying), and highest education level (time varying). The first and third models include whether the respondent has a resident child aged <5, whether the respondent has a resident child aged 5–14, and whether the respondent has a resident child aged 15–24. These variables are not mutually exclusive – respondents can have a resident child in more than one of these age groups. Model 2 uses number of children ever born instead of resident children. Model 3 (the model which will be discussed) also includes how important religion is to the respondent.

6.6   Results

6.6.1   Indicators of Repartnering by Age and Sex

Table 6.2 provides indicators of the percentages of people experiencing various types of repartnering. Collecting relationship histories is a difficult task: there is often missing information on dates, or forgotten relationship information; recall

Table 6.2 Repartnering indicators by age and sex, 2005 (HILDA 2001–2005, retrospective information included)

Age group (years)	% ever experienced a relationship dissolution (those ever in a relationship)			% ever repartnered (those ever experienced a relationship dissolution)			% ever married more than once			% ever cohabited more than once			% remarried after death of partner (if a spouse died)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
20–29	48	48	48	60	61	61	0	1	0	12	15	14	na	na	na
30–39	46	49	47	79	75	77	5	6	6	20	19	19	na	na	na
40–49	49	52	51	78	71	74	13	15	14	18	13	15	na	na	39
50–59	47	50	48	77	64	70	22	21	21	11	8	9	na	22	29
60+	39	57	48	58	34	42	18	17	17	3	1	2	27	10	14

na not available (due to small numbers)

error is a major issue (Gaskell et al. 2000; Hayford and Morgan 2008; Reimondos et al. 2011). In the case of HILDA, only a partial cohabitation history is collected (Reimondos et al. 2011). This means that there is a somewhat limited range of indicators available using retrospective relationship measures.

Distinct patterns are evident even with these limited indicators. Consider first the percentage that have ever experienced relationship dissolution, and who have been or are at risk of repartnering. The proportion is around 50 % for all age groups, but it is noticeable in the group aged 60+ that men are less likely to have experienced relationship dissolution than women. This is related to two demographic processes: (1) women tend to marry men a few years older than themselves; and (2) men have a shorter life expectancy. This means that women are much more likely to have experienced a dissolution than men in the older age groups.

Secondly, in the younger age groups there is little difference between men and women in the percentage who repartner. However, by age group 40–49 a greater percentage of men have repartnered than women, and this gap widens in the older age groups.

Perhaps surprisingly, there is little difference in the percentage of men and women who have married more than once, however there are some differences in the percentage that have cohabited more than once. In their 20s women are more likely than men to cohabit more than once, while men in their 40s and 50s are more likely than women to cohabit more than once.

Finally, looking at the percentage remarried after the death of the spouse, we again see the effects of the age difference in marriage and the longevity of men in these results. Women are affected earlier by spousal death than men; 22 % of those aged 50–59 have repartnered following a spouse dying. Too few men in this age group have experienced a spousal death to make an estimate of repartnering. In the 60+ age group, despite more women having experienced a spousal death, women are much less likely to repartner (10 %) than men who have experienced a spousal death (27 %).

6.6.2 Time to Repartnering

The survival graphs (Figs. 6.4, 6.5 and 6.6) provide information about the time to repartnering for people who have experienced relationship dissolution since 2000. Figure 6.4 shows that those people who experienced a marital dissolution had a longer survival time (that is, they were single for longer) than those who had a cohabitation breakdown. Of those who were previously cohabiting, about half had repartnered within 5 years of the previous relationship. For those who were previously married, almost half had repartnered 9 years after the previous relationship.

Looking at the repartnering times separately for men and women and by previous relationship type, it is evident that for those who were previously cohabiting there was no difference in the time to entering a subsequent relationship for men and women. However, among those who were repartnering after a marriage, men have a faster time to repartnering than women (about half of men had repartnered within 7 years, while only 40 % of women had repartnered 9 years post-marriage).
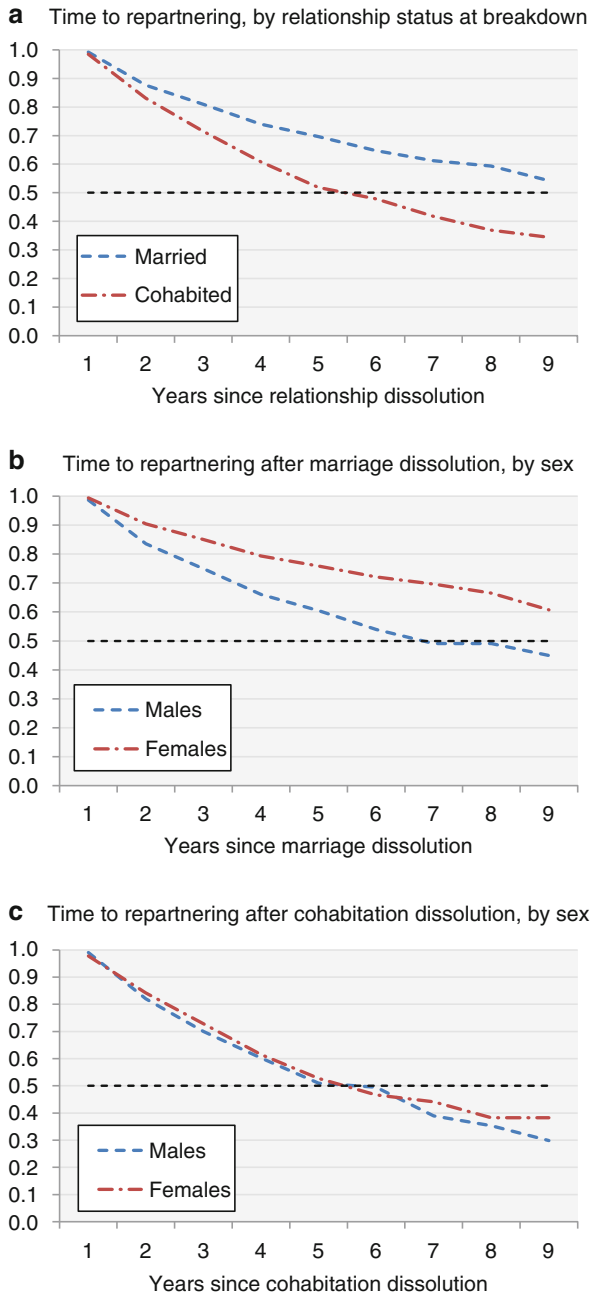
a   Time to repartnering, by relationship status at breakdown

b   Time to repartnering after marriage dissolution, by sex

c   Time to repartnering after cohabitation dissolution, by sex

Fig. 6.4 Survival analysis: time to repartnering (**a**) by previous relationship type; (**b**) by sex for previous marriage; (**c**) by sex for previous cohabitation
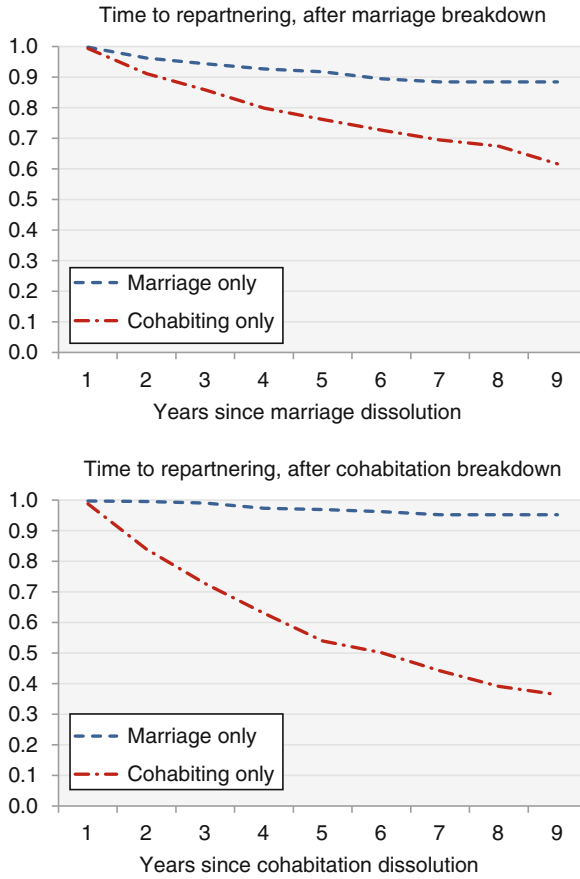
Fig. 6.5 Survival analysis: time to repartnering by previous relationship type
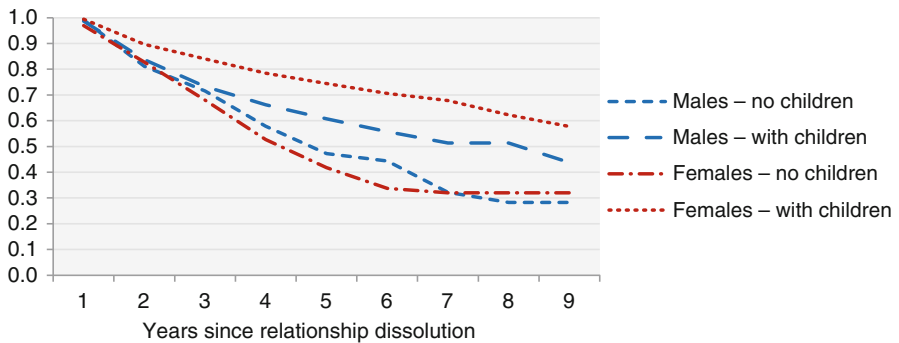

Fig. 6.6 Survival analysis: time to repartnering by sex and parenthood

While the initial type of relationship is important for repartnering timing, more important is the type of relationship that people are entering. There is a much slower time to entering marriage than cohabitation, and this pattern holds whether people were leaving a marriage or cohabitation (Fig. 6.5). For those who were previously married, around 10 % entered a new marriage without cohabiting, while around 40 % entered a cohabitation not followed by marriage. This pattern was more extreme for those previously cohabiting: only a small percentage (less than 5 %) entered directly into a marriage, while over 60 % were observed to cohabit without marrying.

Although not shown here, these survival curves were compared by sex. There was no significant difference in the patterns observed for those whose previous relationship was cohabitation. However, for repartnering after marriage, men were more likely to either cohabit or remarry than women.

As expected, children played a significant role in the time to repartnering, which differed for men and women. Figure 6.6 shows the time to repartnering for men and women by whether they have a child or not. The solid lines show that for men and women with no children, there is no significant difference in the survival time to repartnering. However, for fathers and mothers there is a statistically significant difference. Fathers repartner faster than mothers, and are more likely to repartner over the period. Fifty percent of fathers have repartnered in around 7 years following dissolution.

The pattern for those with a resident children is more nuanced. Resident children matter in different ways for men and women (Fig. 6.7). This figure is based on respondents who are parents, but whose children may or may not be resident. It is interesting that having resident children matters for men; those who have a resident child aged 15 years or less have a slower progression to repartnering, and are less likely to repartner over the period than men who do not have a resident child. For women, the pattern is opposite, although not statistically significant. Of course, these results do not control for other factors, so this may be partly an age effect whereby women who do not have resident children are older than women with resident children.
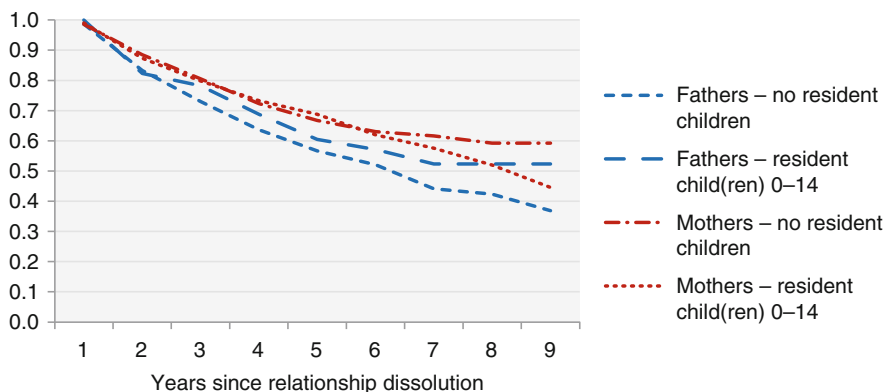

Fig. 6.7 Survival analysis: time to repartnering by sex and residence of children

6.6.3 Event History

Model 3 (Table 6.3) provides the results regarding 'who' and 'how' people repartner, as it includes the characteristics associated with repartnering, as well as whether

Table 6.3 Event history analysis of overall repartnering, marrying and cohabiting, logistic regression (HILDA 2001–2010)

	Repartnering	Marrying	Cohabiting
Sex			
Male (ref)	–	–	–
Female	0.66***	0.30***	0.91
Duration of relationship			
<1 year	1.28	1.05	1.45
1–2 years	1.39*	3.99**	1.19
3–5 years (ref)	–	–	–
6–9 years	1.54**	1.50	1.33
10+ years	1.03	1.30	1.03
Unknown	0.81	0.20	1.08
Type of relationship which ended			
Marriage (ref)	–	–	–
Cohabitation	0.77*	0.17***	1.02
Age (time varying)			
<29	1.09	0.84	1.11
30–39 (ref)	–	–	–
40–49	0.62***	0.77	0.65**
50–59	0.39***	0.38*	0.47***
60+	0.07***	0.27**	0.04***
Highest education level (time-varying)			
University	1.21	1.80	0.83
Diploma or certificate	1.14	1.34	0.88
Year 12 (ref)	–	–	–
Year 11 or below	1.09	1.58	1.01
Resident children			
No resident children (ref)	–	–	–
Has own resident child aged <5	1.20	4.45***	1.11
Has own resident child 5–14	0.73**	1.46	0.58***
Has own resident child aged 15–24	0.98	2.64***	0.61*
Importance of religion grouped			
Not important	1.13	1.41	1.17
Somewhat important (ref)	–	–	–
Important	0.94	3.17**	0.72
Missing	0.82	1.23	0.73
Time	1.22***	1.18	1.26***
Total number of person years	5,624	5,624	5,624
Number of persons	1,439	1,439	1,439

*p<0.10; **p<0.05; ***p<0.01

people repartner into a marriage or into a cohabitation. As mentioned previously, most respondents did not repartner in the time that they were observed, and of those that did repartner, most were likely to cohabit. However, there are different characteristics associated with who marries and who cohabits.

As evident in the survival analysis, women are less likely to repartner than men. They are much less likely to marry than men (odds = 0.30), but are not significantly less likely to cohabit.

Duration of previous relationship is associated with marriage but not cohabitation; those whose previous relationship was of 1–2 years being much more likely to marry than those with other relationship durations. The type of relationship that ended was also associated with marriage but not cohabitation, with those whose previous relationship was cohabitation having a significantly lower odds (0.17) of marrying than those who were previously married.

Age was negatively associated with both marrying and cohabiting. For marriage, those aged 50–59 (odds = 0.38) and 60+ (odds = 0.27) had a lower odds of marrying than those aged 30–39, while for those who moved into a cohabitation, those 40–49 (odds = 0.65), 50–59 (odds = 0.47), and 60+ (0.04) had a lower odds of cohabiting. There was no apparent effect of education.

Having resident children showed mixed results, and nothing consistent is evident. As the effect of having children was thought to be different for men and women, these models were run separately by sex (results in Table 6.4).[1] These results show that men who have resident children under age five are most likely to repartner compared to men with no resident children or older resident children. The effect was very large for cohabiting, with men who had a resident child less than five having an odds 13 times greater than men with no resident child. These results also showed that there was a lower propensity to repartner for women who had a resident child present. The odds are lower for both repartnering and cohabitation, with all the estimates for cohabitation being statistically significant. These results, for both men and women, are counter to the survival curves shown earlier. Disaggregating the results by more specific age of children, as well as controlling for other factors, shows the common finding that children have an effect on repartnering for women, but a more surprising result for men – that fathers with young children are more likely to repartner.

Patterns of repartnering by age also show some differences between men and women (Table 6.4). While from age 40 both men and women are less likely to repartner, the odds are substantially lower for women than for men in the 50–59 year age group.

Finally, religiosity was also associated with marriage, with those who stated that religion was 'important' having odds 3.17 times higher than those who stated that religion was 'somewhat important'.

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[1] Discrete-time event history models of repartnering by sex could only be calculated for an overall measure of repartnering and for cohabitation. The numbers were too small to be able to analyse marriage.

Table 6.4 Event history analysis of overall repartnering and cohabiting, by sex (HILDA 2001–2010)

	Repartnering		Cohabiting	
	Male	Female	Male	Female
Duration of relationship				
<1 year	1.36	1.27	1.72	1.37
1–2 years	1.88**	1.13	1.81	0.99
3–5 years (ref)	–	–	–	–
6–9 years	1.82**	1.44	1.74	1.24
10+ years	1.43	0.79	2.25**	0.62
unknown	0.68	0.83	1.34	0.85
Type of relationship which ended				
Marriage (ref)	–	–	–	–
Cohabitation	0.85	0.74	1.34	0.89
Age (time varying)				
<29	1.16	0.89	1.12	0.98
30–39 (ref)	–	–	–	–
40–49	0.58***	0.59**	0.60*	0.60*
50–59	0.49***	0.24***	0.56*	0.33***
60+	0.11***	0.04***	0.03***	0.05***
Highest education level (time-varying)				
University	1.33	1.12	0.83	0.85
Diploma or certificate	1.36	0.98	1.02	0.74
Year 12 (ref)	–	–	–	–
Year 11 or below	1.27	1.10	0.97	1.13
Resident children				
No resident children (ref)	–	–	–	–
Has own resident child aged <5	7.23***	0.71	13.30***	0.56*
Has own resident child aged 5–14	0.83	0.55***	0.38**	0.53*
Has own resident child aged 15–24	1.50	0.75	0.90	0.51*
Importance of religion grouped				
Not important	1.15	1.18	1.97*	0.91
Somewhat important (ref)	–	–	–	–
Important	1.42	0.75	1.42	0.53*
Missing	1.00	0.79	0.92	0.84
Time	1.27***	1.22***	1.26***	1.23***
Total number of person years	2,344	3,280	2,344	3,280
Number of persons	629	810	629	810

*p<0.10; **p<0.05; ***p<0.01.

6.7   Conclusion

Repartnering in twenty-first century Australia differs for men and women, for different age groups, and by whether people have children or not. Other factors such as the duration of the previous relationship, and the type of relationship which ended, seem to have little effect on the likelihood of repartnering, at least when controlling for other factors. It is interesting that the descriptive survival curves showed that there are patterns depending on which type of relationship ended, but when controlling for other aspects of life, these patterns were not apparent.

In discussing previous research on repartnering, the concepts of 'need, attractiveness and opportunity' were raised (Ivanova et al. 2013; Skew et al. 2009). This is a useful frame in which to consider these results based on the first decade of the twenty-first century in Australia. Socio-economic factors such as poor living conditions were not considered here, but taking education as one measure of individual opportunity, there is no evidence that people with lower labour market attractiveness use repartnering as a way to boost economic position. As noted, earlier research found that this was a strategy that could be used to relieve pressure on female-headed households (Duncan and Hoffman 1985; Smock 1990; Weston and Khoo 1993).

Age may be a measure of attractiveness and opportunity, and its effect varies substantially by sex. Gendered notions of attractiveness tend to diminish for women at older ages, certainly more so than for men. Further, women are less likely to have opportunities for meeting partners due to a lower involvement in paid work, which is a prime place for meeting potential partners (de Graff and Kalmijn 2003).

The effect of having resident children is also highly gendered. Men who have young children were found to have a substantially higher probability of repartnering than other men. However, men are much less likely to have resident children of that age compared to women. As noted, women with resident children of any age are less likely to repartner than women without children. Further, men and women without children have a similar propensity to repartner. Children have a substantial effect on the different patterns of repartnering for men and women.

There are many other variables that are not accounted for in this analysis, mainly due to a lack of data. For example, in the USA, Sweeney (2002) found that those who initiated the relationship dissolution entered new relationships more quickly than non-initiators. This was a stronger result for older women, perhaps wanting to make sure of their future before leaving a relationship. This type of research is useful to help us better understand why and when people leave relationships and enter new ones.

An important finding from this research is that those who are repartnering are not necessarily remarrying. In the case of Australia, it is more likely that they will be cohabiting in their new relationship, whether their last relationship was a marriage or cohabitation. This is not unique to Australia, and is further evidence of the continuing change in modern family forms. Future research should consider cohabitation, as well as other relationship types such as those 'living apart together' as forms of repartnering and not focus solely on remarriage.

Appendix 6.1: Exclusions and Treatment of Missing Data

Exclusions

Waves 1–10 were pooled. Respondents were excluded if they were:

- Only present in one wave
- Partnered (with the same partner) at every wave they were observed
- Separated but then reunited with the same partner
- Never partnered at any point in time they were observed

If there were multiple separations over the period, the first separation and new partnership formed were retained.

Measure of the Importance of Religion

Independent variables were age, sex, highest education and parity. These variables were all taken from every wave the respondent was observed in. Special treatment was required for the *importance of religion* variable however, as this was only available from the self-completion questionnaire in Waves 4, 7 and 10.

The following procedure was used: If the respondent had information on religiosity for all three Waves (4, 7 and 10) then Wave 4 information was applied to Waves 1–4, Wave 7 information was applied to Waves 5–7 and Wave 10 information to Waves 8–10.

Wave 1	Wave 4
Wave 2	
Wave 3	
Wave 4	
Wave 5	Wave 7
Wave 6	
Wave 7	
Wave 8	Wave 10
Wave 9	
Wave 10	

If the respondent had information from only one of the waves, then this information was applied to all the waves they were observed in. If they had information from only two waves then information from those two waves was used. For example in the case of the respondent only having information from Waves 4 and 10, then Wave 4 information would be used for Waves 1–4 and Wave 10 information for Waves 5–10.

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Chapter 7
Patterns of Contraceptive Use

Edith Gray and Dharmalingam Arunachalam

7.1 Introduction

As succinctly expressed by Frost et al., the 'average (American) woman – who wants two children – spends about three decades trying to avoid pregnancy and only a few years trying to become or being pregnant' (2008, p. 1). No doubt this phrase adequately describes the situation of Australian women, or women in any Western-industrialized country. In this chapter we focus on women's use of contraception for preventing births, by comparing Australian women to women from other comparable countries, and by investigating the factors that predispose the choice of method.

Recent Australian studies have shown that the most popular contraceptive method is the contraceptive pill (Gray and McDonald 2010; Richters et al. 2007; Yusuf and Siedlecky 2007). Condoms are the next most commonly used, followed by vasectomy and tubal ligation. Santow (1991) demonstrates the rapid increase in the use of the contraceptive pill from its introduction in 1961 through to 1986. Her research also describes the very low uptake of the intrauterine device (IUD). Despite the IUD being the most widely used reversible method in the world, there are considerable regional differences in its use, with much higher prevalence rates in developing countries (d'Arcangues 2007). Estimates from Australia show that few women use IUDs: less than 2 % of women of reproductive age (Gray and McDonald 2010; Yusuf and Siedlecky 2007). This level is similar to the USA (3.4 % in 2006–2008) (Mosher and Jones 2010) and Japan (2 % in 2000) (d'Arcangues 2007),

E. Gray (✉)
College of Arts and Social Sciences, Australian National University,
Canberra, Australia
e-mail: Edith.Gray@anu.edu

D. Arunachalam
School of Social Sciences, Monash University, Melbourne, Australia
e-mail: dharma.arunachalam@monash.edu

while in the U.K. it is slightly higher: 8 % of women used an IUD or intrauterine system (IUS) in 2008–2009 (ONS 2009).

In fact, contraceptive uptake and method use varies considerably between (and within) countries. The reasons are numerous, and relate to the policy setting (Bateson et al. 2011), provider recommendations (Black et al. 2012; Gemzell-Danielsson et al. 2012; ONS 2009), individual knowledge (Bajos et al. 2003; Frost et al. 2008), and reproductive life stage (Gray and McDonald 2010; Lucke et al. 2009, 2011; Read et al. 2009).

This chapter starts by outlining the use of contraceptive methods across countries from which relatively comparable data is available. This is followed by a closer look at patterns of contraceptive use in Australia, and an investigation of how contraceptive use is related to fertility intentions.

7.2 Background

As noted by Sexual Health and Family Planning Australia (the national peak body for sexual health and family planning organisations in Australia), there 'are no routinely collected data on contraceptive use in Australia that is (*sic.*) both reliable and complete' (2013). From 1977 information on contraceptive use has been collected in the National Health Survey (NHS), but was last collected in this survey in 2001. There is also detailed information on contraceptive use in the Australian Longitudinal Study of Women's Health, a cohort study that started in 1996 with follow-up every 3 years. More recently, questions on contraceptive use have been asked in the Household, Income and Labour Dynamics in Australia (HILDA) survey. HILDA is a longitudinal panel study that follows individuals in households over time (see Technical Appendix). Data on contraceptive use were collected in 2005, 2008 and 2011, so while the HILDA sample is smaller than the NHS sample, it has the advantage of collecting information not only more recently, but also on the same individuals over time. It also covers all women of reproductive age.

Estimates based on 2008 data show that Australian women are most likely to use the contraceptive pill to prevent pregnancy (Gray and McDonald 2010). Around 30 % used oral contraceptives, including 8 % who used them in combination with condoms. Parr and Siedlecky (2007) note that this combination of methods is very common in Australia. Of women using a contraceptive method, 31 % used oral contraceptives, 21 % used condoms, 12 % used a combination of oral contraceptives and condoms, 14 % of women had a partner who had a vasectomy, and 10 % had tubal ligation. The remaining 12 % used IUDs, injectables, implants, and other methods including 'traditional' (non-medical) methods (Gray and McDonald 2010).

Like Yusuf and Siedlecky (2007) who used 2001 NHS data, Gray and McDonald (2010) found that oral contraceptive use was highest for women in their twenties, and condom use declined at each age group. Vasectomy and tubal ligation were also widely used, particularly from age 35.

Contraceptive use is not only related to age but is also closely related to fertility intentions or reproductive life course stage (Gray and McDonald 2010). Longer acting contraceptive methods tend to be used when people have completed their families (Gray and McDonald 2010), and women change their contraceptive use after birth, miscarriage and termination. Lucke et al. (2011) found that women increase their contraceptive use after a birth, decrease their use after a miscarriage, and change contraceptive method following a termination.

7.3 Data

As contraceptive method use is only collected in sample surveys in Australia, we use the HILDA survey to examine the prevalence of contraceptive method, and the factors associated with contraceptive method. The HILDA sample is broadly representative of the Australian population, and has the most recent data on contraceptive use. The following provides more information about the HILDA data used, and the data used for comparative purposes.

7.3.1 Australia

HILDA is used to examine the factors associated with contraceptive use and method. We use waves 5, 8 and 11 of the data, collected in 2005, 2008 and 2011. These waves contain a panel of questions on fertility that were asked as part of an international comparative survey, the Generations and Gender Programme (GGP) (see also Sect. 5.5). Information about the GGP is available at http://www.ggp-i.org/. The fertility module contains information about fertility histories, pregnancy, contraception and fertility intentions, which are used in this paper to understand patterns of contraceptive use.

We also consider a number of socio-demographic factors that have been found to be associated with contraceptive method use. As indicated previously, age is associated with the type of contraceptive method used (Yusuf and Siedlecky 2007; Gray and McDonald 2010), but age is also associated with life course stage, specifically reproductive life course stage (Gray and McDonald 2010). Age is not a perfect measure of whether people have children, how many children they have, or whether and when they intend to have more children. For this reason, the number of children, and the timing of fertility intentions are also included in the analysis. There is also evidence of differences by education (Richters et al. 2007), and partnership status, geographical location, and cultural background are also likely correlates (Gray and McDonald 2010). Here, we consider difference in use by city, regional or remote area, and by country of birth and Aboriginal or Torres Strait Islander status as measures of cultural background.

7.3.2 Comparison Countries

The Generations and Gender data are used to provide an international comparison of contraceptive use. The countries for which contraceptive data are available are Austria, Bulgaria, Estonia, France, Georgia, Germany, Norway, Romania and Russia. We use Wave 1 of the GGP survey that was collected in 2005 for most countries, and use HILDA Wave 5 collected in 2005 for comparative purposes.

7.4 Method

7.4.1 Cross-Country Comparison

The GGP data are used to compare patterns of contraceptive use. First, women of reproductive age (18–44)[1] are classified as to whether they are potentially 'at risk' of pregnancy. The sample includes women who are in a heterosexual partnership. The categories are (1) potentially at risk of pregnancy; (2) pregnant; (3) cannot get pregnant (physical reasons); (4) cannot get pregnant (respondent is sterilized); and (5) cannot get pregnant (partner is sterilized). Australia is included in these results, and the countries included are age-standardized to Australia's age distribution in 2005 for comparability.

Categories 4 (sterilization) and 5 (partner sterilization) are, in most cases, procedures that have been undertaken for contraceptive purposes. However, in many of the GGP countries female sterilization does not distinguish between hysterectomy – a procedure that is not usually for contraceptive purposes – and tubal ligation that is. One might assume that male sterilization is usually for the purpose of contraception, but not all countries collect data on its use. As we will show, vasectomy and tubal ligation are widely used in Australia, so in later analysis they are included as contraceptive methods.

We then look at the methods of contraception used for those who are potentially at risk of pregnancy (category 1 above). A percentage distribution of contraceptive method use is provided for each country, and this distribution includes the percentage of women who are not using any contraception. Australia is investigated separately, as described below.

7.4.2 Australia

The Australian contraception data cannot be directly compared to the GGP data. This is because the GGP asks respondents to provide the main method, and then asks what additional methods are used in later questions. In comparison, the

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[1] While most countries asked about contraceptive used up to age 49, for comparability the age range 18–44 is used as Austria does not ask women aged over 44 about contraceptive method.

questions in the HILDA survey ask whether the respondent uses each and every method. This means that respondents can use more than one method, and a percentage distribution of a 'main method' cannot reasonably be determined. However, we report the percentage using each method. Method use, for the three major methods,[2] is then compared for different sections of the Australian population, and we specifically investigate factors that have been found to be associated with contraceptive method.

7.5 Results

7.5.1 Contraceptive Use Across Countries

Typically, women who are not at risk of pregnancy are excluded from measures of contraceptive use. Figure 7.1 presents the categories of women who are not currently at risk of pregnancy alongside the majority who are at risk of pregnancy and therefore 'at risk' of using contraception. For those not at risk of pregnancy, Fig. 7.1 shows the reason that contraception is unnecessary (see also Appendix 7.1, Table 7.5).

Among non-users of contraception, Fig. 7.1 distinguishes between women who are pregnant, and those who are non-users for physical reasons or due to sterilization
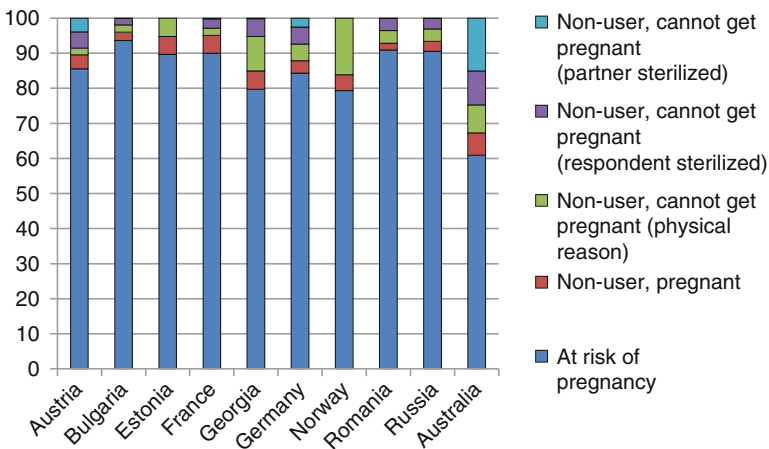

Fig. 7.1 Women according to risk of pregnancy[a] (%) (see Appendix 7.1, Table 7.5)
[a]The category 'At risk of pregnancy' includes partnered women who are at risk of pregnancy and who are therefore potential users of contraception

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[2]Multivariate analysis of the use of vasectomy and tubal ligation is not included because respondents are not asked about fertility intentions. One can assume that these methods have been used because the respondent does not intend to have a child in the future.
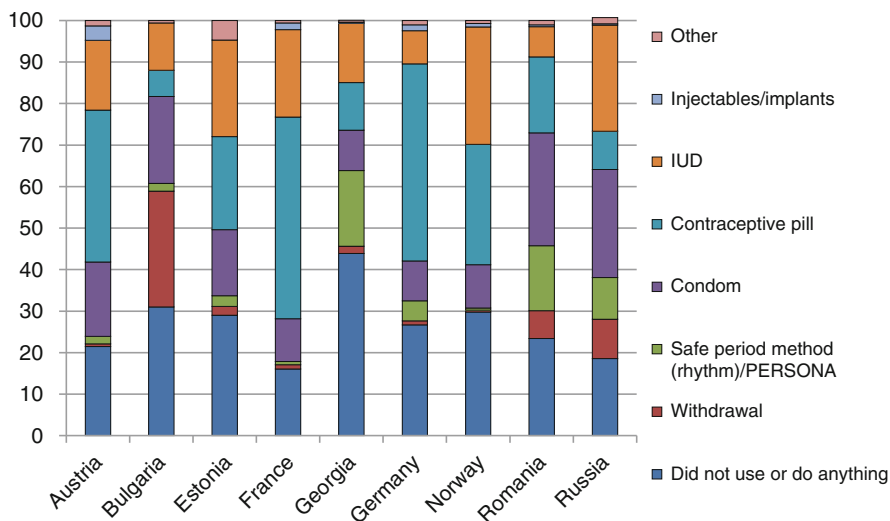
Fig. 7.2 Women at risk of pregnancy: method of contraception by country (%) (see Appendix 7.1, Table 7.6). 'Other' includes diaphragm, cervical cap, foam, cream, jelly, suppository, emergency contraception and other. 'PERSONA' is a branded method that involves monitoring hormone levels through urine tests to provide information on which days a woman is at risk of becoming pregnant

(of themselves or their partner). Note that in Norway respondents are not asked if they or their partners are sterilized, while in Estonia women are not asked if their partners are sterilized. For those countries the percentage that cannot get pregnant for physical reasons includes sterilization.

Australia stands out in the use of male methods of sterilization (vasectomy).[3] Around 15 % of partnered women state that their partners have been sterilized. In Austria, Georgia and Germany, around 5 % of women have experienced tubal ligation or hysterectomy, methods which are slightly more common in Australia (almost 10 %). The percentage of women who are pregnant varies between 2 % and 6.5 %.

The patterns of contraceptive method show large differences by country (Fig. 7.2, see also Appendix 7.1, Table 7.6). First, the percentage of women using contraception varies substantially. The lowest percentage using no contraception was in France (16 %), while the highest percentage using no contraception was in Georgia (44 %).

Method use also varies by country. Withdrawal is virtually never reported in Austria, France, Germany and Norway, while a considerable percentage report its use in Bulgaria (28 %). The safe period method is used more in Georgia,

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[3] Note that as vasectomy and tubal ligation are widely used in Australia as contraceptive methods, they are included as contraceptive methods in the analysis of factors associated with contraceptive type for Australia. It is not possible to include vasectomy and tubal ligation as contraceptives in the comparative analysis because there is such a wide difference in the information collected between countries.

Romania and Russia than in other countries. Condom use ranges between 10 % (Germany, Georgia and France) to around 26 % (Russia and Romania). The contraceptive pill is used by large percentages in Austria (36 %), and Germany and France (48 %). The IUD is most commonly used in Norway (28 %), and is also popular in other countries such as Russia (26 %), Estonia (23 %), France (21 %) and Austria (17 %).

7.5.2   Contraceptive Use in Australia

As previously discussed, contraceptive use in Australia has been dominated by oral contraception (the contraceptive pill). Data from Santow (1991) and Yusuf and Siedlecky (2007) clearly document these patterns in different age groups and over various cohorts of women from the 1970s onwards. The results of this analysis confirm that oral contraception remains the most commonly used method of Australian women (Table 7.1). As indicated, respondents to HILDA can provide multiple responses, although in most cases women only indicate one method. Table 7.1 provides the percentage of women using each contraceptive method for the years 2005, 2008 and 2011.

Table 7.1 includes two panels. The first includes all women aged 18–44 who are at risk of pregnancy; that is, they are not pregnant, and do not cite physical reasons for being unable to become pregnant (consistent with the aforementioned older studies, however, these data are not restricted to partnered women). The second panel includes only women who are current users of contraception.

The 'all women at risk of pregnancy' section of Table 7.1 is the most comparable to the cross-country GGP data, although it must be remembered that the HILDA survey allowed Australian women to nominate more than one contraceptive type. In 2005, which is the year of collection in most of the GGP countries, the levels of oral contraceptive use in Australia are similar to those in Austria and Norway, but are much lower than in France or Germany, while women's reported use of the condom is considerably higher in Australia, but notably lower than in Russia and Romania. Further, the level of IUD use is lower than in all the countries included in the GGP, and in most cases, much lower. Although the rate of use of injectables and implants is somewhat higher than in the comparison countries, it is still a fairly low uptake at 5 %.

The results from 2005 to 2011 show some changes in the prevalence of contraceptive method type. Among women who are contraceptive users (Fig. 7.3), the dominance of oral contraceptives continues, and has increased, albeit slightly, between 2005 and 2011, with 48 % of contraceptive users indicating that they use oral contraceptives. In longer terms, this is up from about 40 % of contraceptive users in 1995 (ABS 1998). There have been declines in the percentages reporting tubal ligation (from 10 to 6 %) and partner vasectomy (14–13 %). The greatest increases are evident for women who are using IUDs (3–5 %) and implants (4–5 %). Allen (2012) notes that the 'insertion of IUDs is returning to the domain of general

Table 7.1 Women aged 18–44 years, method of contraception (HILDA 2005, 2008 and 2011)

Contraceptive method	All women at risk of pregnancy			Women who use a contraceptive method[a]		
	Per cent using method (95 % confidence interval)			Per cent using method (95 % confidence interval)		
	2005	2008	2011	2005	2008	2011
Oral contraceptive	30.4 (28.2–32.6)	29.6 (2.7–3.2)	32.5 (30.4–34.5)	44.1 (41.3–46.9)	45.0 (4.2–4.8)	47.8 (45.2–50.4)
Oral contraceptive only	22.0 (20.0–23.9)	21.7 (2.0–2.4)	22.5 (20.7–24.3)	31.9 (29.3–34.5)	33.0 (3.0–3.6)	33.2 (30.7–35.6)
Condom	22.4 (20.4–24.4)	20.4 (1.8–2.2)	21.9 (20.1–23.8)	32.6 (29.9–35.2)	31.0 (2.8–3.4)	32.3 (29.9–34.8)
Condom only	14.0 (12.5–15.6)	12.5 (1.1–1.4)	12.0 (10.6–13.4)	20.4 (18.2–22.6)	19.0 (1.7–2.1)	17.7 (15.7–19.6)
Oral contraceptive + condom	8.4 (6.9–9.8)	7.9 (6.6–9.2)	10.0 (8.6–11.3)	12.2 (10.1–14.2)	12.1 (1.0–1.4)	14.7 (12.7–16.6)
Tubal ligation[b]	6.7 (5.5–7.9)	5.0 (3.9–6.1)	4.1 (3.2–4.9)	9.8 (8.2–11.5)	7.6 (5.9–9.3)	6.1 (4.8–7.3)
Vasectomy[b]	9.5 (8.3–10.7)	9.0 (7.8–10.2)	8.4 (7.2–9.5)	13.9 (12.3–15.6)	13.8 (12.0–15.6)	12.5 (10.8–14.2)
Intrauterine device	1.6 (1.1–2.2)	2.2 (1.5–2.8)	3.2 (2.5–3.9)	2.4 (1.6–3.2)	3.3 (2.3–4.2)	4.8 (3.8–5.8)
Injectable	2.0 (1.5–2.6)	0.9 (0.5–1.2)	1.6 (1.1–2.1)	2.9 (2.1–3.7)	1.3 (0.8–1.9)	2.4 (1.6–3.2)
Implant	2.9 (2.1–3.8)	3.4 (2.6–4.2)	3.7 (2.9–4.4)	4.3 (3.0–5.5)	5.2 (4.0–6.4)	5.4 (4.3–6.5)
Withdrawal	2.4 (1.8–3.0)	2.4 (1.7–3.1)	2.4 (1.8–3.0)	3.5 (2.6–4.3)	3.7 (2.7–4.7)	3.5 (2.6–4.4)
Safe period method[c]	1.6 (1.1–2.1)	1.8 (1.0–2.5)	1.6 (1.0–2.1)	2.3 (1.6–3.0)	2.7 (1.6–3.7)	2.3 (1.5–3.1)
Other[d]	1.2 (0.5–1.8)	1.2 (0.8–1.7)	1.6 (1.1–2.1)	1.7 (0.8–2.7)	1.8 (1.2–2.5)	2.3 (1.6–3.1)
N	2,552	2,482	2,315	1,757	1,633	1,571

Note: Data are weighted by the cross-sectional responding person population weight for each wave
[a]Percentages do not add up to 100 because of multiple responses
[b]Respondents who answer 'yes' to having a tubal ligation or 'yes' to partner having a vasectomy were not asked about using other contraceptive methods
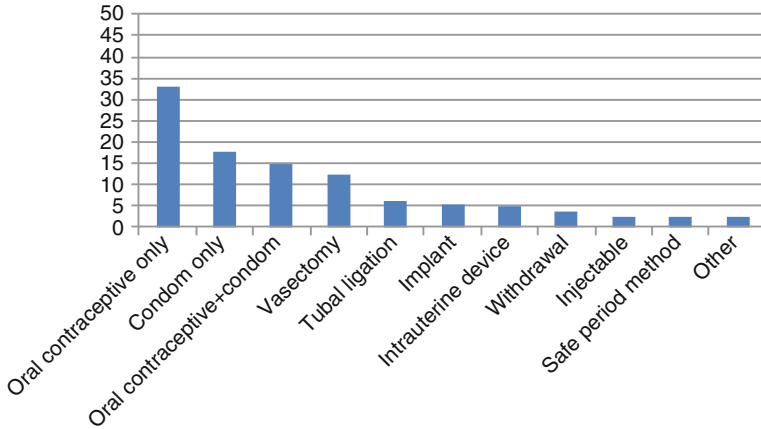[c]Safe period method (rhythm method) or PERSONA

Fig. 7.3   Contraceptive users: method of contraception, 2011 (%)

practice' (2012, p. 771), which may be associated with the reported increase in IUD use. It will be interesting to follow whether any further increase in IUD and implant use is associated with a further decline in tubal ligation.

7.5.3   *Contraceptive Use by Characteristics of Partnered Women*

Overall, there are socio-demographic differences in the type of contraception used (Table 7.2). These relate to age, partnership status, country of birth, parity and number of additional intended children. This section outlines the patterns that are evident in terms of contraceptive method use by women who are partnered.

Starting with the most commonly used contraceptive method, the results show that oral contraceptives are more likely to be used by partnered women who have no children (44 %) than those who have children. There is a decline in use over the age groups, with young adult women having the highest usage (almost 60 % of women aged 18–24). Those who intend to have two or more children (more than 45 %) are more likely to use oral contraceptives than those who intend no more children, or one more child, and those in a cohabiting relationship are more likely to use them than those who are married.

Condom use declines as the number of children ever born increases, and also at each age group. Condom are more likely to be used by partners of women who intend to have more children, and their use is very low among Aboriginal and/or Torres Strait Islander women.

There is also an age dimension to the use of injectables and implants for partnered women. Women aged 18–24 are most likely to be using one of these

Table 7.2 Summary: partnered women aged 18–44, use of various contraceptive methods by background characteristics, 2011 (%) (HILDA 2011)

	Pill	Condom	Injectable/implant	IUD	Withdrawal/safe
Children ever born	***	**		***	
0	44.3	26.6	5.8	0.2	3.8
1	21.9	23.5	5.2	2.1	5.8
2	24.5	19.1	5.7	8.8	5.3
3	14.2	15.5	4.0	4.4	2.7
4+	10.3	12.7	4.7	2.2	6.9
Age	***	***	**	**	
18–19	58.0	38.7	16.3	–	0.9
20–24	58.8	26.8	10.6	0.9	2.6
25–29	40.0	33.9	8.6	1.9	4.7
30–34	28.1	21.3	6.1	3.1	4.8
35–39	21.0	19.6	2.9	4.2	5.5
40–44	12.0	10.8	2.8	6.8	4.3
Number of additional intended children	***	**	*	**	
0	18.8	17.3	4.0	5.8	4.5
1	25.9	21.6	8.7	2.8	6.0
2	45.9	29.4	6.0	0.4	4.0
3	56.5	22.6	4.5	0.5	5.4
4+	48.1	32.9	7.6	0.0	2.9
Education level	*	**			+
Bachelor or higher	27.0	27.6	4.3	3.8	6.3
Advanced diploma	20.0	18.0	6.7	7.0	6.6
Certificate	29.7	17.3	7.0	4.7	4.0
Yr 12	31.7	18.0	5.7	3.2	3.3
<Yr 12	22.9	15.8	4.0	2.4	1.8
Relationship type	***	*	**	*	
De facto	38.6	23.9	8.4	2.3	4.5
Married	21.0	19.3	3.7	4.8	4.7
Region	+				
Major city	25.7	21.6	4.5	4.1	4.7
Inner regional area	31.6	20.9	6.6	3.5	4.1
Outer regional/remote	24.8	16.7	7.0	4.0	5.1
Country of birth	**	+			
Australia	28.7	20.7	5.7	4.1	4.4
Main English speaking country	20.6	19.0	4.7	6.2	6.2
Europe	40.1	25.2	1.5	2.8	7.4
Asia	12.6	23.9	3.0	–	4.7
Other	21.1	18.3	4.2	5.2	4.4
Aboriginal and/or Torres Strait Islander		*	+		
No	26.8	21.1	5.2	4.0	4.5
Yes	35.0	8.1	11.0	2.4	9.9

***p<0.0001; **p<0.01; * p<0.05; + p<0.10
Weighted N=1,319. Number of observations: 1,696

contraceptive methods (over 10 %). The other notable association is that women in de facto cohabiting relationships are more likely to be using this method.

Women are most likely to use an IUD if they have two children (almost 9 %), and the use increases at each age group. It is also more likely to be used by women who do not intend to have any more children than by women who intend another child. This is also the only method which married women are more likely to be using than cohabiting women.

We also examined the use of 'traditional methods.' Withdrawal and the safe period method show no particular differences by the background factors examined. These methods are often used for religious reasons, a factor not considered here because information on religion and religiosity was not consistently collected in the same waves as information on contraception.

These socio-demographic patterns are further examined using logistic regression. This provides insights into relationships between background factors and contraceptive method use, controlling for other factors in the model. Logistic regression is the most suitable method as it is possible that women were using more than one method: this means that a summative variable of main method used cannot be created. Hence, in these models, a woman can be a 'user' of both oral contraception and condoms (for example), and it is not possible to categorize her as one over the other.

The logistic regression results show that method use is associated with age in particular, but also reproductive life course stage (Tables 7.3 and 7.4). The results presented include models of oral contraceptive, condom, injectables/implants, and IUD usage. The model of use of withdrawal or safe period method is not shown, as there are no differences by background factors, with the exception of timing of fertility intentions. The results show that the only significant factor is whether a woman intends to have a child within 3 years or 4–5 years: these women are significantly more likely to be using withdrawal or the safe period method than women who intend to have no more children.

Looking first at the factors associated with contraceptive pill use (Table 7.3), the results show that women have a greater odds of using the contraceptive pill if they have no children or two children; presumably because effective contraception is most important to women who do not (yet) wish to have children and to those who may have completed their families (women with two children also have a higher odds of using the IUD). The contraceptive pill is also more likely to be used by young women aged 18–24. The odds of using oral contraception reduce at each age group from 25–29. Fertility intentions are also associated with using the contraceptive pill: women who plan to have a child in the next 3 or 4–5 years have a higher odds of using this contraceptive method.

The pattern for condom use is different, although it is also a method most likely to be used at younger ages. Partnered women are most likely to report using condoms at ages 18–19, 20–24 and 25–29. From age group 30–34 the use of condoms declines dramatically. Condom use is also associated with education level, with women who have at least a bachelor degree more likely to report use of condoms.

Table 7.3 Logistic regression: use of oral contraceptions and condoms for partnered women aged 18–44, 2011 (HILDA 2011)

	Oral contraception					Condom				
	B	SE	Exp B	SE	Sig.	B	SE	Exp B	SE	Sig.
Children ever born										
0	0.26	0.204	1.29	0.264		−0.06	0.221	0.94	0.208	
1	−0.48	0.231	0.62	0.142	*	0.17	0.233	1.18	0.275	
2 (ref.)	0.00		1.00			0.00		1.00		
3	−0.63	0.239	0.53	0.127	**	−0.21	0.238	0.81	0.193	
4+	−0.91	0.389	0.40	0.156	*	−0.18	0.361	0.84	0.303	
Age										
18–19	−0.23	0.483	0.80	0.385		0.75	0.535	2.12	1.132	
20–24 (ref.)	0.00		1.00			0.00		1.00		
25–29	−0.65	0.203	0.52	0.106	**	0.19	0.224	1.21	0.271	
30–34	−0.87	0.229	0.42	0.096	***	−0.51	0.267	0.60	0.161	+
35–39	−1.16	0.245	0.31	0.077	***	−0.73	0.266	0.48	0.129	**
40–44	−1.71	0.265	0.18	0.048	***	−1.40	0.309	0.25	0.076	***
When do you intend to have next child?										
No children intended (ref.)	0.00		1.00			0.00		1.00		
Within 3 years	0.68	0.260	1.97	0.513	**	−0.39	0.296	0.68	0.201	
4–5 years	0.88	0.341	2.42	0.826	*	0.47	0.352	1.59	0.560	
6–10 years	−0.08	0.185	0.92	0.171		−0.51	0.189	0.60	0.113	**
Unable to answer	0.01	0.302	1.01	0.305		−0.15	0.352	0.86	0.302	
Education										
Bachelor or higher (ref.)	0.00		1.00			0.00		1.00		
Diploma	−0.32	0.229	0.72	0.166		−0.53	0.250	0.59	0.148	*
Certificate	−0.04	0.187	0.96	0.180		−0.70	0.196	0.49	0.097	***
Yr 12	0.02	0.192	1.02	0.195		−0.70	0.209	0.49	0.103	**
<Yr 12	−0.05	0.238	0.95	0.228		−0.64	0.243	0.53	0.128	**
Relationship type										
De Facto (ref.)	0.00		1.00			0.00		1.00		
Married	−0.11	0.157	0.89	0.141		0.09	0.164	1.09	0.179	
Region of residence										
Regional or remote (ref.)	0.00		1.00			0.00		1.00		
Major city	−0.23	0.140	0.80	0.112		−0.03	0.149	0.97	0.144	
Country of birth										
Australia (ref.)	0.00		1.00			0.00		1.00		

(continued)

Table 7.3 (continued)

	Oral contraception					Condom				
	B	SE	Exp B	SE	Sig.	B	SE	Exp B	SE	Sig.
MES	−0.19	0.287	0.83	0.238		−0.06	0.299	0.95	0.283	
Europe	0.48	0.359	1.62	0.582		0.12	0.413	1.13	0.466	
Asia	−0.78	0.354	0.46	0.163	*	0.11	0.284	1.12	0.317	
Other	0.01	0.490	1.01	0.495		−0.03	0.430	0.97	0.416	
Aboriginal or Torres Strait Islander (ATSI)										
ATSI	0.44	0.452	1.55	0.699		−1.04	0.518	0.35	0.184	*
Not ATSI (ref.)	0.00		1.00			0.00		1.00		

MES Main English-speaking countries
***p<0.0001; **p<0.01; *p<0.05; +p<0.10
Weighted N=1,261. Number of observations 1,636

Table 7.4 Logistic regression: use of injectables or implants and IUDs for partnered women aged 18–44, 2011 (HILDA 2011)

	Injectables					IUD				
	B	SE	Exp B	SE	Sig.	B	SE	Exp B	SE	Sig.
Children ever born										
0	−1.02	0.387	0.36	0.140	**	−3.60	0.771	0.03	0.021	***
1	−0.53	0.385	0.59	0.226		−1.02	0.451	0.36	0.163	*
2 (ref.)	0.00		1.00			0.00		1.00		
3	−0.29	0.428	0.75	0.320		−0.85	0.366	0.43	0.156	*
4+	0.09	0.518	1.09	0.566		−1.37	0.622	0.25	0.158	*
Age										
18–19	0.53	0.642	1.71	1.096		–		–		
20–24 (ref.)	0.00		1.00			0.00		1.00		
25–29	−0.11	0.329	0.89	0.294		0.66	0.944	1.93	1.819	
30–34	−0.54	0.432	0.58	0.252		0.68	0.964	1.97	1.899	
35–39	−1.45	0.464	0.24	0.109	**	0.58	0.967	1.79	1.727	
40–44	−1.57	0.478	0.21	0.099	**	0.99	0.990	2.68	2.652	
No children intended (ref.)	0.00		1.00			0.00		1.00		
Within 3 years	−1.10	0.600	0.33	0.199	+	−1.75	1.071	0.17	0.187	
4–5 years	0.30	0.501	1.36	0.680		0.27	1.193	1.31	1.562	
6–10 years	−0.13	0.328	0.88	0.287		−0.94	0.547	0.39	0.214	+
Unable to answer	0.00	0.522	1.00	0.524		1.32	0.873	3.74	3.267	
Education										
Bachelor or higher (ref.)	0.00		1.00			0.00		1.00		
Diploma	0.36	0.394	1.43	0.564		0.51	0.424	1.66	0.704	
Certificate	0.06	0.346	1.06	0.368		0.18	0.378	1.19	0.451	

(continued)

Table 7.4 (continued)

	Injectables					IUD				
	B	SE	Exp B	SE	Sig.	B	SE	Exp B	SE	Sig.
Yr 12	−0.21	0.386	0.81	0.312		−0.17	0.472	0.85	0.400	
<Yr 12	−0.55	0.421	0.58	0.244		−0.61	0.469	0.54	0.255	
Relationship type										
De facto (ref.)	0.00		1.00			0.00		1.00		
Married	−0.74	0.303	0.48	0.144	*	−0.02	0.376	0.98	0.369	
Region of residence										
Regional or remote (ref.)	0.00		1.00			0.00		1.00		
Major city	−0.33	0.256	0.72	0.184		0.19	0.307	1.21	0.370	
Country of birth										
Australia (ref.)	0.00		1.00			0.00		1.00		
MES	−0.03	0.628	0.97	0.609		0.16	0.493	1.17	0.577	
Europe	−1.24	1.038	0.29	0.299		−0.44	1.049	0.64	0.676	
Asia	−0.35	0.614	0.71	0.435		–		–		
Other	0.04	0.786	1.04	0.819		0.28	0.649	1.32	0.854	
Aboriginal or Torres Strait Islander (ATSI)										
ATSI	0.45	0.557	1.57	0.875		−0.60	0.984	0.55	0.541	
Not ATSI (ref.)	0.00		1.00			0.00		1.00		

MES Main English-speaking countries

Notes: $^{***}p<0.0001$; $^{**}p<0.01$; $^{*}p<0.05$; $+p<0.10$. – Omitted (no cases used this method in this group)

Weighted N = 1,261. Number of observations 1,636

Injectables and implants are related to the number of children ever born (Table 7.4). Women who do not have children have significantly lower odds of using injectables compared with women who have two children. Women who have two children have odds 2.8 times higher of using an injectable or implant than women who have no children. As with the contraceptive pill, there is a decline in the use of injectables and implants over the age groups. Women aged 35+ are significantly less likely to be using one of these methods than women aged 20–24 and women who are married are less likely to be using these methods than those in cohabiting relationships.

Finally, IUD use shows very little relationship to any of the explanatory factors except the number of children born. This method tends not to be used by women who haven't had children. The odds are highest for women with two children, probably reflecting the strong two-child norm in Australia (see Chap. 9). Although not statistically significant, women who intend to have a child in the next three years have very low odds of use.

7.6   Conclusion

Partnered women in Australia predominantly use the oral contraceptive pill. The rate of use in Australia is similar in Austria and Germany, but is otherwise considerably higher than in the comparison countries considered. Two other methods that are used widely in Australia compared to other countries are vasectomy and tubal ligation.

However, there have been notable changes over recent years in the use of different contraceptive methods. Contraceptive pill uptake continues to increase, up from 40 % in 1995 to over 48 % of users in 2011. IUD and implant use has increased in recent years, but there has been decreased use of tubal ligation, vasectomy and injectables.

The use of different methods is associated with age and reproductive life course stage. While there are clear trends in use at different age groups, the number of children born and fertility intentions are both important considerations when decisions are made about contraceptive method. Women are more likely to use the pill or implants/injectable when they have no children, while IUD use is associated with having had two or more children. It appears that this is not a method chosen by, or perhaps recommended to, young or nulliparous women. Allen (2012) suggests that the introduction of a 'mini' version of an IUD may increase usage by these women.

Despite the increase in the use of IUDs by Australian women, their use is still substantially lower than in some European countries like France and Norway. It is interesting that although Australia has had a similar level of fertility to France, the USA, and the Scandinavian countries, the means by which these fertility levels are achieved are quite different. While US data is not strictly comparable with the GGP data analysed in this chapter, the US has comparatively high levels of partner sterilization (vasectomy is used by around 11 %) and condom use (25 %), similar levels of individual sterilization (around 6 %), and lower levels of contraceptive pill use (25 %) (ONS 2009). Among the countries included in this analysis, France had the highest use of oral contraceptives, while Norway had high levels of IUD use.

Condom use, which is relatively high in Australia, showed interesting differences by education level: women with higher levels of education were more likely to state that they were using this as a method of contraception. This method requires negotiation between both partners in a couple, and so perhaps condoms are better suited to women with higher levels of education.

Most striking is that the contraceptive methods used today are dominated by modern medical methods that are almost entirely controlled by women. Methods involving men's cooperation have declined in use, particularly over the last 40 years or so, with very low levels of withdrawal and declines in condom use. We will watch with interest how medical technology and individual uptake progresses over the coming years.

Appendix 7.1

Table 7.5 Partnered women of reproductive age (18–44): reason stated for not being at risk of pregnancy (%) (GGP Wave 1, selected countries) HILDA Wave 5 (Australia)

	Austria	Bulgaria	Estonia	France	Georgia	Germany	Norway	Romania	Russia	Australia
At risk of pregnancy	85.5	93.6	89.7	90.0	79.7	84.3	79.3	90.9	90.6	60.9
Non-user, pregnant	4.0	2.4	5.1	5.1	5.2	3.6	4.5	1.9	2.8	6.4
Non-user, cannot get pregnant (physical reason)	1.9	2.1	5.3	2.1	9.8	4.7	16.2	3.6	3.5	8.0
Non-user, cannot get pregnant (r. sterilized)	4.6	1.8	0.0	2.5	5.1	4.9	n.a.	3.5	3.0	9.6
Non-user, cannot get pregnant (p. sterilized)	3.9	0.1	n.a.	0.4	0.2	2.5	n.a.	0.1	0.1	15.1
N	2,349	3,344	1,441	1,983	1,801	1,958	2,765	1,882	2,404	1,812

n.a. Not available
Responses weighted to the Australian age distribution

Table 7.6 Women at risk of pregnancy: method of contraception by country (%) (GGP Wave 1, selected countries)

	Austria	Bulgaria	Estonia	France	Georgia	Germany	Norway	Romania	Russia
Did not use or do anything	21.5	31.0	29.0	16.1	43.9	26.7	29.8	23.4	18.6
Withdrawal	0.7	27.9	2.1	1.0	1.8	1.0	0.4	6.7	9.5
Safe period method (rhythm/persona)	1.8	1.9	2.6	0.8	18.2	4.9	0.5	15.7	10.0
Condom	17.9	21.0	15.9	10.3	9.8	9.6	10.4	27.2	26.1
Contraceptive pill	36.6	6.3	22.5	48.6	11.5	47.5	29.0	18.3	9.2
IUD	16.9	11.4	23.3	21.1	14.3	8.0	28.3	7.3	25.6
Injectables/implants	3.5	0.0	0.0	1.6	0.3	1.4	0.8	0.4	0.3
Other[a]	1.3	0.6	4.7	0.6	0.4	1.1	0.8	1.1	1.5

[a] 'Other' includes diaphragm, cervical cap, foam, cream, jelly, suppository, emergency contraception and other
Responses weighted to the Australian age distribution

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Chapter 8
Australians' Desire for Children

Dharmalingam Arunachalam and Genevieve Heard

8.1 Introduction

Childbearing has been at the centre of demographic enquiry and policy debate for over a decade. This is not surprising since Australia, like other contemporary developed nations, has had below replacement level fertility[1] since the late 1970s, with its attendant demographic and economic consequences. The first decade of the twenty-first century was significant in Australia's demographic history because the long-term decline in the birth rate was reversed. Australian fertility reached its nadir in 2001 with a total fertility rate (TFR) of 1.73. The average number of children per woman then gradually increased to 2.02 in 2008 before dropping back to 1.92 in 2011 (ABS 2013).

The TFR is subject to distortions caused by changes in the timing of childbearing (Bongaarts and Feeney 1998) and may have exaggerated the recent fertility increase, just as it appears to have exaggerated late twentieth century fertility decline (Myrskylä et al. 2012). Australia's TFR increase was most pronounced for women in their twenties and thirties and to some extent reflected 'recuperation' (that is, women 'catching up' on births previously delayed) or 'anticipation' (women bringing forward births that they would otherwise have had later) (Lattimore and Pobke 2008). However, the pattern of increase and then decrease was observed across all

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[1]A replacement-level fertility rate indicates the number of babies a woman would need to have over her reproductive lifespan in order to replace herself and her partner, allowing for current mortality levels. Because the level of fertility required to achieve replacement is dependent on the number of women who survive to reproductive ages, replacement fertility has declined as female life expectancy has increased. While 2.1 is often cited as replacement level, in fact (to two decimal places) it is somewhere between 2.05 and 2.10 (ABS 2011).

D. Arunachalam (✉) • G. Heard
School of Social Sciences, Monash University, Melbourne, Australia
e-mail: dharma.arunachalam@monash.edu; genevieve.heard@monash.edu

ages of women. This suggests that changes in the macro socioeconomic and demographic environment in the 2000s affected all women, irrespective of their age and parity.

Research on childbearing behaviour, rather than intentions or preferences, indicates two broad explanations for this increase (Kippen 2006; Drago et al. 2009; McDonald and Moyle 2010; Parr and Guest 2011). First, Australia, like other western countries, experienced considerable growth in economic opportunities and average income, at least up to the global financial crisis of 2008. As McDonald and Moyle (2010:271) observe, the economic prosperity 'probably provided a confidence among young people to commence their families somewhat earlier than had been the case in the past'. The second explanation concerns the role of family policies designed to prevent further decline in the national fertility rate and, if possible, to reverse the trend. In 2004 the Australian Government introduced a modest Baby Bonus and changes to other family benefits in the following years, with a view to encouraging childbearing. However, studies have not found any noticeable effect of the introduction of the new bonus and increment in existing family benefits on childbearing (Drago et al. 2009; Parr and Guest 2011). Overall, 'the contribution to fertility change of the range of changes to family benefits which coincided with the Baby Bonus has most probably been minor' (Parr and Guest 2011:233).

Against this background of an overall increase in Australian fertility in the past decade, we examine one important aspect of fertility – the desire for children. Internationally, investigation into the dynamics of childbearing desires has assumed increased importance in recent years as below-replacement fertility has persisted and as researchers and policy makers look for solutions to reverse fertility trends across the developed world (Bongaarts 2001; Hagewen and Morgan 2005; Goldstein et al. 2009; Iacovou and Tavares 2011). It is argued that fertility levels below replacement do not necessarily imply a preference for fewer than two children in the lifetime of individuals. Indeed, if individuals were able to realise their stated desired number of children, which is over two children in most countries, then observed fertility would likely exceed replacement level. The search for answers for low fertility, then, moves to examining the individual and institutional factors that constrain individuals from achieving their desires.

In past research, fertility desire was considered a measure of demand for children that was not influenced by changing individual circumstances including changes in fecundity, relationship status and labour market participation (McClelland 1983; Miller and Pasta 1995; Thomson 1997, 2001). In other words, desire is equivalent to something like 'what one would like to do given no situational constraints' (Miller et al. 2004: 194). However, recent research has shown that desire for children is influenced by changes in employment, education, financial situation, partnering status, and attitudes towards gender equity and lifestyles (Heiland et al. 2008; Holton et al. 2011; Gray et al. 2013). This is reflected in recent efforts to understand low fertility which focus on desired fertility rather than directly on achieved fertility. Explanations for low fertility are built around understanding how desired fertility is constrained or enhanced, directly by proximate determinants and indirectly by the broader demographic, social-economic and cultural environment (Bongaarts 2001,

2002; Morgan 2003). In line with this approach, this chapter examines changes in childbearing desires at the individual level during the first decade of the twenty-first century, more specifically from 2001 to 2011.

8.2 What Influences Fertility Desires?

When the focus is on fertility decision-making at the individual level, the explanations for changing desires tend to focus on changing individual circumstances. In other words, changing preferences are understood in terms of changes in the life course, in economic and financial circumstances and in the values and orientations of individuals. This does not mean that structural socio-economic factors are unimportant or ignored. Rather, it is assumed that macro-level changes work through individual choices, values and orientations (de Vaus 2002; Mitchell and Gray 2007). A review of the relevant literature showed four important influences on changes in desires: age, partnering status, changing employment and economic circumstances, and individual values and orientations towards children.

The relationship between age and changing fertility desire is self-evident as fecundity (the biological capacity to have children) declines with age. Although the influence of changing physiological factors is clearer and more direct for women, it also applies to men – perhaps to a relatively lesser extent directly by their own ageing and to a greater extent indirectly through their ageing partners (Heckhausen 1999). Biological constraints aside, ageing comes into conflict with what is 'socially appropriate' at a given age. Thus, as individuals age they are likely to change their intentions as a result of constraints posed by biological and social ageing. This is evident in research from the US (Quesnel-Vallee and Morgan 2003), the UK (Iacovou and Tavares 2011), Germany (Heiland et al. 2008), The Netherlands (Liefbroer 2009), Austria (Sobotka 2009) and Australia (Gray et al. 2013).

Living in a partnership is essential for childbearing in most societies, including Australia. Childbearing intentions are likely to change as singles form new relationships or those in relationships separate, divorce or become widowed (Hayford 2009; Liefbroer 2009; Iacovov and Tavares 2011). At least three Australian longitudinal studies have shown that men and women revise their intentions consequent to changes in relationship status (Qu et al. 2000; Mitchell and Gray 2007; Gray et al. 2013). There is also some difference in desire between those in a married relationship and those cohabiting. Marriage is more strongly associated with increased desire for childbearing than cohabitation (Liefbroer 2009; Gray et al. 2013).

Individuals tend to revise their fertility preferences as their economic and employment situation changes. A spell of unemployment or any decrease in earning affects one's financial ability to have another child. In contrast, any improvement in employment and economic conditions is likely to intensify the desire for additional children. However, as research in the Netherlands and the UK has shown, individuals are less likely to desire additional children even when their employment and economic prospects improve if they consider that additional children are an

impediment to their careers and incomes (Liefbroer 2009; Iacovov and Tavares 2011). Not only is one's experience in the labour market important, even one's perceived employment opportunities and sense of financial security can affect one's desire for additional children (Holton et al. 2011; Gray et al. 2013).

A final explanation for the desire to have children centres on affective reasons: a child is to love and care for and to provide meaning and connectedness in an individualised world (Bulatao 1981; Mitchell and Gray 2007). Giddens (1991) and Beck (1992) argued that in post-materialist societies individuals are engaged in constructing their own coherent 'biography' with no particular 'standard' to compare their achievements against. In late modernity, characterised by a lack of structure and regularity in individual life, having children can bring certainty and predictability to life routines, which is considered important for building individual identity through a narrative of the self (Friedman et al. 1994; Morgan and King 2001; Morgan 2003). In other words, in low fertility societies, though there are no economic benefits to having children, 'parenthood may provide a powerful source of connectedness and meaning' in life (Morgan 2003: 593). In such a social environment an individual's desire for children may intensify if it is perceived that children are relevant and important to leading a meaningful life and to self-realisation.

8.3 Data and Method

The objective of this chapter is to explore how life course and attitudinal changes are associated with changing fertility desires over time. This is addressed by using data from the first 11 waves (2001–2011) of the Household, Income and Labour Dynamics in Australia (HILDA) survey. The methodological and sampling details of the survey are provided in the Technical Appendix. Here we outline the main variables used and the method of analysis employed.

In each wave of HILDA all respondents aged 18–49 were asked the question: 'Would you like to have a child of your own/more children in the future?'. The degree to which respondents desired additional children was indicated on an eleven-point 0–10 scale with the extreme values labelled 'Definitely do not want children' and 'Definitely want children'. We treat the fertility desire variable as a continuous variable as this makes the interpretation of results straightforward and allows us to capture even small changes in fertility desires for individuals over time. Treating it as a categorical variable would make the interpretation complex as there would be eleven categories to consider in descriptions and interpretations. Although this could be overcome by merging adjacent values into fewer categories (for instance, into three groups; 0–3, 4–6, 7–11), this classification would underestimate the overall change because change within each category would be ignored.

We use an unbalanced sample of men and women who were interviewed in at least two waves between 2001 and 2011. The analysis presented here is based on a final total sample of 14,121 respondents (7,251 women and 6,875 men) contributing 61,706 person years. Sample size by gender and parity is given in Table 8.2.

As the focus is on change in desire for additional children over time between 2001 and 2011, we include only time-varying independent variables. Variables that do not change during the period of observation (e.g. country of birth, year of birth, number of siblings) are not included in the analysis. The variables are grouped under three broad headings: life course variables, structural factors and values/orientation variables. The variables and their associated values are:

Age (18–24, 25–29, 30–34, 35–39, 40–44)
Relationship status (single, married, cohabiting)
Period (2001–4, 2005–8, 2009–11)
Highest education (University, Certificate/Diploma, Year 12 or less)
Employment status (working, unemployed, not in the labour force)
Self-rated health (excellent, very good, good, fair/poor); as this information was
    included in the self-completion questionnaire, a 'missing' category was used to
    include those who did not return the questionnaire.

Satisfaction with employment opportunity: this was treated as a continuous variable with values ranging from 0 to 10. More satisfaction is associated with higher values, less satisfaction with lower values. The questionnaire also included a statement on 'satisfaction with financial situation'. One-way analysis of variance for desire for additional children among those childless at the time of interview showed that satisfaction with one's 'employment opportunity' was more powerful in accounting for change in fertility desire than satisfaction with one's 'financial situation'. We therefore decided to include only the former in the analysis.

A special fertility module with a comprehensive list of attitudinal and behavioural questions on family formation was included in Waves 5, 8 and 11. Each of these three waves included a set of attitudinal statements assessing how individuals evaluated the importance of a number of factors in making their decision to have another child. The results of one-way analysis of variance indicated five variables that had the strongest association with the change in desire for additional children. These variables along with their response categories are listed below. All the attitudinal variables had a category for missing values to include a significant number of respondents who did not respond to these questions or did not return the self-completion questionnaire.

A women has to have children in order to be fulfilled (disagree, mixed feelings, agree)
Having time and energy for career (not important, limited importance, important,
    very important)
Having someone to love (not important, limited importance, important, very
    important)
Providing more purpose to life (not important, limited importance, important, very
    important)
Giving parents grandchildren (not important, limited importance, important, very
    important).

We analyse the revisions in desire for additional children, not the desire for additional children as such. Thus the dependent variable is change in desire from the mean self-rated desire (averaged over the number of waves for which the

individual was observed) for each individual. It is analytically powerful and meaningful to relate the changes in the dependent variable, fertility desire, to changes in the independent variables. As mentioned above, all our independent variables are time-varying, and by implication time-invariant variables are not included in the analysis. We therefore employ fixed effect regression models to estimate the influence of covariates that vary for individuals over time; this modelling approach does not use the information on variation between persons (Allison 2005; Gray et al. 2013; Rabe-Hesketh and Skrondal 2012). The within-person regression is run separately for men and women and by parity. The estimated coefficients are presented in Tables 8.2, 8.3, and 8.4.

8.4 Desired Family Size

We first examine the average desired family size in the 2000s in Australia, comparing different groups within the population, and then present the regression results on changes in individual desires in Sect. 8.5. The desired family size was obtained by adding the number of additional children desired to the number of children individuals already have. For those who already have one or more children, the desired family size may be an overestimate to the extent that any existing children were unplanned and 'unwanted' when they were conceived. Nevertheless, the measure gives some indication of desired family size at the population level.

The reported desired number of children by selected characteristics is presented in Table 8.1. As would be expected in low-fertility societies, the desired family size is above the achieved total fertility rate of recent years in Australia. More importantly, the overall desired family size is 2.06, which, if fully realised in individuals' lifetimes, would be just enough to replace the population in the long run. The total fertility rate in the early 2000s (2000–2004) was around 1.73 but increased to around 1.95 in the late 2000s (2008–2010). However, the cohort fertility rate (CFR) for women aged 40–44 in 2011, who were close to completing their childbearing, was 1.99 and the average completed family size of women aged 45–49 in 2011 was exactly 2.06 (see Chap. 9.1 for an explanation of these measures). This means that current fertility in Australia is very close to the desired level, assuming the estimated desired level reported by HILDA respondents is close to the 'true' figure.

Desired family size by period indicates that the prevailing social, economic and political environment may influence childbearing desires and actual fertility behaviour in the same direction and to a similar extent. The desired family size was lower in 2001–2004 than in the latter half of the decade. This is similar to the trend in the TFR over the decade. Gender differences in desired family size are also interesting. Women in general desire a larger family size, above two children, than men whose average desired size is slightly less than two.

Although desired family size increases with age, the increase is minimal up to age 35. The increase above age 35 may reflect post-facto rationalisation of children born more than any increase in desire for a larger family size. Interesting, however,

Table 8.1 Desired family size by selected characteristics in Australia, 2001–2011

Characteristics	Desired number of children
Overall	2.06
Year	**
2001–2004	2.00
2005–2008	2.13
2009–2011	2.06
Gender	**
Male	1.97
Female	2.15
Education	**
University	1.99
Certi/diploma	2.07
Year 12	2.04
Year 11 or less	2.15
Age	
18–24	2.00
25–29	2.05
30–34	2.05
35–39	2.09
40–44	2.13
Relationship status	*
Married	2.36
Cohabitation	2.04
Single	1.69

**p<.05; * p<.10, tested using one-way analysis of variance; Also assessed for violations of homogeneity of variance assumption using 'simanova' add-on in Stata 12.0

is the difference by relationship status. The reported desired family size among people who are single (1.69) is much lower than that reported by those living in a partnership, although close to the observed TFR between 2001 and 2004. It is likely that singles revise their preferences upward once they enter into a relationship (see Sect. 8.4). Being married is also associated with desiring more children, on average, than cohabiting. These differences indicate the importance and relevance of partnership formation to fertility desires and behaviours.

The last factor of importance in Table 8.1 is education. There is a clear education gradient to desired family size. The university-educated reported on average a smaller desired family size (1.99) than the rest. Those who had not completed Year 12 reported the largest desired family size (2.15).

It is clear from the data provided here that the average desired family size in Australia is still above two children, and that there was a slight increase in the desired size in the second half of the last decade. It is also evident that women, those without degrees, and partnered people desire on average a larger number of children. Conversely, men, singles and the university educated prefer fewer children – on average, less than two.

8.5 Changes in Fertility Desires and Their Correlates

The results of the fixed effects regression models by gender and parity are presented separately for each of the three sets of independent variables in Tables 8.2, 8.3 and 8.4. Although they are presented in three separate tables for ease of description and interpretation, the estimates come from a single regression model that included all the variables presented in Tables 8.2, 8.3 and 8.4. The regression coefficients indicate the direction (plus or minus) and magnitude of change in the dependent variable as the independent variable changes from the reference category or changes from one value to another (for the non-categorical variable 'satisfaction with employment opportunity').

All three variables shown in Table 8.2 have a strong relationship with change in desire for additional children. It is clear that as people age and when they experience any change in their relationship status they are likely to revise their desires for additional children. Although there is a gradual decline in the desired number of children as people age, age 30–34 appears to be a threshold. As people move into the late thirties and early forties, they revise their preferences downward substantially. This is the case at all parities. Gray et al. (2013) described a similar finding among those who had no children at the time of interview. The results presented here show that the negative relationship between age and desire for additional children extends to women and men at all parities.

The estimates for the 40–44 age group show that the magnitude of the relationship differs by parity. In particular, when individuals reach ages 40–44, they revise their desire for additional children downward to a greater extent if at parity zero or one than if they are at parity two or more. For instance, childless women aged 40–44 revise their desire for additional children downward by 1.74 points compared to when they were aged 30–34. This is three times the revision made by women with at least three children. Although the relationship between age and change in desire holds for both men and women, the relationship is more pronounced for women than for men.

Another result worth highlighting is the relationship between age and change in desire among women at parity two. Among those with two children, the desire for children was lower at both younger and older ages compared to when these women were aged 30–34. Most notably, women when aged 18–24 expressed a desire for additional children that was 1.16 points lower than the desire expressed when they were aged 30–34. Although the magnitude of changes in desire seems similar among both younger and older women, the underlying drivers of such change may be different.

Partnership status has a strong association with change in desire. Being in a relationship, whether married or cohabiting, increases the desire for additional children. Here the relationship is gender and parity dependent. While the relationship is observed across almost all women, irrespective of the number of children they have already had, it holds only for men without any children. Being in a married relationship increases the desire for additional children among women with no children or

Table 8.2 The effects of age and relationship status on desire for additional children, men and women, 2001–2011

	Women – desires for additional children					Men – desires for additional children				
	Parity 0	Parity 1	Parity 2	Parity 3+		Parity 0	Parity 1	Parity 2	Parity 3+	
Age group										
18–24	0.09	0.58	−1.16***	−0.19		0.11	0.17	−0.33	−1.78***	
25–29	0.14*	0.17	−0.06	0.40**		0.10	−0.05	0.42**	0.60**	
30–34 (ref)	–	–	–	–		–	–	–	–	
35–39	−0.50***	−0.36*	−0.47***	−0.41***		−0.44***	−0.43***	−0.05	−0.43***	
40–44	−1.74***	−1.26***	−0.94***	−0.68***		−0.96***	−0.78***	−0.29	−0.57*	
Relationship status										
Single (ref)	–	–	–	–		–	–	–	–	
Married	0.66***	1.04***	0.20	−0.28		0.77***	0.47	−0.32	−0.85*	
Cohabiting	0.43***	0.69***	0.44*	0.75***		0.41***	0.12	0.27	0.18	
Period										
2001–2004 (ref)	–	–	–	–		–	–	–	–	
2005–2008	−0.06	−0.58***	−0.12	−0.50***		0.01	−0.62***	−0.07	−0.39***	
2009–2011	−0.07	−1.03***	−0.29**	−0.72***		0.06	−0.92***	−0.46***	−0.64***	
No. of observations	14,332	4,495	7,433	5,422		16,398	4,157	5,803	3,666	
No. of respondents	3,005	1,475	1,684	1,087		3,354	1,343	1,378	800	
Fraction of variance due to person level	0.65	0.62	0.71	0.55		0.63	0.65	0.71	0.61	

Note: The variables presented in Tables 8.3 and 8.4 are included as controls
*$p<.10$; **$p<.05$; ***$p<.01$

Table 8.3 The effects of selected structural factors on desire for additional children, women and men, 2001–2011

	Women – desires for additional children				Men – desires for additional children			
	Parity 0	Parity 1	Parity 2	Parity 3+	Parity 0	Parity 1	Parity 2	Parity 3+
Education								
University	−0.09	0.98	0.71	−0.97	−0.13	0.91	−0.69	−0.95
Cert/diploma	0.13	0.25	0.08	−0.27	0	0.18	−0.06	−0.18
Year 12 or less (ref)	–	–	–	–	–	–	–	–
Labour force status								
Working (ref)	–	–	–	–	–	–	–	–
Unemployed	0.11	−0.13	0.36**	−0.15	0.02	0.30	−0.08	−0.34
Not in labour force	0.11	−0.00	0.16*	−0.09	−0.10	0.20	−0.18	−0.16
Self-rated health								
Excellent	0.06	−0.29	−0.03	−0.42***	0.20***	−0.21	−0.08	−0.15
Very good (ref)	–	–	–	–	–	–	–	–
Good	−0.05	0.16	0.04	−0.04	0.04	−0.07	−0.13	−0.22**
Fair/poor	−0.24***	−0.06	−0.23*	−0.11	−0.07	0.01	−0.16	0.23
Satisfaction with economic opportunity (score 0–10)	0.02	−0.02	0.00	0.05***	0.06***	−0.01	0.04*	0.06***

Note: The variables presented in Tables 8.2 and 8.4 are included as controls
*$p < .10$; **$p < .05$; ***$p < .01$

with one child only. It is interesting that living in a cohabiting relationship, not in a marital union, has a positive influence on the desire for additional children among women with two or more children. This may indicate that cohabiting women with two or more children are likely to live with a new partner, and may want to strengthen the relationship by having children with their new partner.

In terms of period, there is an apparent gradual downward revision in people's desire for additional children over the decade in question. The results of the population level analysis reported in Table 8.1 showed that the average desired family size increased in the latter half of the 2000s. In contrast, the within-person results provided in Table 8.2 point to both men and women experiencing declines in their desire for children by 2005–2011 compared to the 2001–2004 period. This apparent difference may be due to the fact that the results in Table 8.2 are from a robust multivariate analysis whereas Table 8.1 presents unrefined bivariate results.

There was one exception: for men and women without children, the desire for additional children remained stable throughout the entire decade. In other words, the effect of socio-economic and political changes over the decade was parity specific. While these changes negatively influenced the preferences of men and women

Table 8.4 The effects of selected individual values and orientations on desire for additional children, women and men, 2001–2011

	Women – desires for additional children				Men – desires for additional children			
	Parity 0	Parity 1	Parity 2	Parity 3+	Parity 0	Parity 1	Parity 2	Parity 3+
A woman has to have children								
Disagree	–	–	–	–	–	–	–	–
Mixed feelings	0.15*	0.09	0.10	0.03	0.23***	0.03	0.02	-0.07
Agree	0.24*	-0.12	0.11	0.03	0.25**	-0.27	0.29	-0.64**
Having time and energy for career								
Not important	–	–	–	–	–	–	–	–
Limited important	-0.47***	-0.44*	-0.09	-0.30	-0.20***	-0.42*	0.23	-0.17
Important	-0.59***	-0.55**	-0.23	-0.57*	-0.28***	-0.37	0.07	-0.57*
Very important	-0.85***	-1.26***	-0.38*	-0.74***	-0.42***	-0.03	0.56*	-1.23***
Having someone to love								
Not important	–	–	–	–	–	–	–	–
Limited important	0.32***	-0.36	0.13	0.40	0.42***	-0.19	0.29	0.15
Important	0.39***	-0.25	-0.20	0.58	0.49***	-0.10	0.30	0.41
Very important	0.56***	-0.30	-0.21	0.53**	0.65***	0.28	0.12	0.90**
Providing more purpose in life								
Not important	–	–	–	–	–	–	–	–
Limited important	0.11	0.60**	0.27	0.88***	0.15	-0.01	0.35	-0.21
Important	0.33***	0.70**	0.36**	0.23	0.36***	0.14	0.13	-0.27
Very important	0.39***	1.03***	0.51**	0.30	0.45***	0.12	0.19	0.14
Giving parents grandchildren								
Not important	–	–	–	–	–	–	–	–
Limited important	0.28***	0.24	-0.04	0.13	0.11	0.64***	0.06	-0.06
Important	0.40***	0.47*	0.23	0.19	0.22***	0.48*	0.37	-0.77**
Very important	0.54***	0.27	0.27	0.68*	0.15	0.44	0.11	0.37

Note: The variables presented in Tables 8.2 and 8.3 are included as controls
*p<.10; **p<.05; ***p<.01

with at least one child, childless people were immune to such socio-economic changes in developing their desires for children.

In Table 8.3 are the estimated associations between change in fertility desire over time for individuals and change in four factors, which we classify as structural. It is interesting that change in education was not related to change over time in individual childbearing desires. This was true across all parities. Although the magnitude of the association was substantial for both men and women with university level qualifications for parities one and above, it was not statistically significant. We believe this is because the change in educational attainment, particularly among those aged 25–44, was likely to apply to very few individuals, yielding high stand errors which render the estimated associations statistically insignificant. Nonetheless, the estimated coefficients indicate that women with a university education were likely to express an increased desire for additional children if they already had one or two children, but a decreased desire for additional children if they already had three or more children. Change in desire for children in either direction is equally likely among all childless women irrespective of their completed level of education. A similar pattern is observed among men without children.

Although Gray et al. (2013) found that childless men experienced a decrease in their desire for children as they became unemployed or moved out of the labour force, our analysis did not show any such relationship for any parity. This was also the case among women, with one exception. Women with two children expressed an increase in their desire for additional children as they became unemployed or left the labour force entirely for one reason or another.

We considered two economic variables: satisfaction with economic opportunities and satisfaction with one's financial situation. The analysis showed no consistent relationship between the change in one's self-assessment of one's financial situation and change in fertility desire. But any improvement in an individual's satisfaction with employment opportunities increased his or her desire for additional children. This was very much the case for almost all men, but true only for women who had at least three children. Taken together, these results indicate that desire for additional children is more sensitive to changes in perceived employment opportunities than to perceived financial security, and that this is more relevant for men than for women.

The associations between changes in desire for additional children and changes in selected attitudes and values relating to children are given in Table 8.4. While the effects of some variables are parity specific, others are gender specific. Those who believed that a woman has to have children in order to be fulfilled in life, those who considered it important to have someone to love and those who thought it important to give parents grandchildren were likely to report stronger desire for children. More importantly, this relationship holds only among those without any children at the time of interview. The absence of the relationship among men and women with at least one child may be expected as these three goals (fulfilment, someone to love and providing grandchildren) can be achieved with just one child (Bulatao 1981; McDonald 2000a, b).

Those with a view that children provide more purpose in life were more likely to experience an increase in their desire for additional children. While this relationship was found among women without children and with one or two children, it was evident only for men without any children. In other words, men seem to consider that more purpose in life is achieved by becoming a parent, rather than by having many children. By contrast, for women, more children seem to provide more purpose in life.

The last attitudinal variable was whether having time and energy for career was important to the desire for additional children. The results indicate that women in particular consider this a critical dimension in their desires for more children. Of all the 'values and attitudes' variables included in the analysis, this value dimension had the strongest relationship across all parities. The relationship was observed only among childless men, although it was not as strong as it was among women.

8.6   Discussion and Conclusion

This chapter has provided descriptive results on desired family size and has examined changes in desire for additional children as expressed by individual respondents over time. We used the relevant data from 11 waves of HILDA. Guided by the literature, we have analysed changes in individuals' desire over time by a number of explanatory factors, which we classified as life-course, structural and values and orientation variables. The results showed most variables included in the analysis had significant associations with changes in the desire for additional children. However, while some were equally important across all parities and for both men and women, others were parity and gender specific.

The results show that the average desired family size in Australia is over two children, which, if fully realised, would be just enough to replace the population over time through reproduction. This suggests that decline in desired fertility in the last decades of the twentieth century was less than the decline in observed fertility as measured by the TFR. According to a Survey of Birth Expectations carried out in 1979, the average expected number of children was around 2.5 (Ruzicka and Caldwell 1982: 228). Although the 'expected' number is different from the 'desired' number of children, it is reasonable to infer, in the absence of more comparable data, that the desired size has declined by around 0.44 children between 1979 and the 2000s. The average desired family size in Australia in the 2000s is, however, similar to what is found in comparable industrialised countries with the possible exception of the German-speaking areas of Europe (Kohler et al. 2002; Goldstein et al. 2003, 2009). There were some differences in average desired family size, particularly by gender, education and partnership status. In particular, men, the university educated and single people expressed preferences for less than two children. Conversely, women, those who did not complete year 12 and those in married or cohabiting relationships wanted more than two children.

The lowest preferred family size (1.69) was observed among those not in any partnership. Individuals are likely to revise their desired number of children upward as they enter into a relationship. This is evident from analysis of change in desire over time, presented in Table 8.2. A change in relationship status from single to married or cohabiting increases the desire for additional children particularly among women. Although growing numbers of Australian children in the last decade or two have been born to cohabiting couples, childbearing among those not in co-residential relationships is still a rare phenomenon. This finding corresponds to a core social norm among Australians, observed both in historical and in contemporary times: establishing a stable and secure relationship is a prerequisite for childbearing for most (Ruzicka and Caldwell 1982; Caldwell 1982; Qu et al. 2000; Baxter et al. 2008; Lattimore and Pobke 2008; Hewitt and Baxter 2012; Shanahan 2007; Heard 2007, 2011; Heard and Dharmalingam 2011; also see Sect. 9.6.1 in this volume). It is for this reason that a sound understanding of fertility behaviour requires a sound grasp of the formation and dissolution of partnerships in Australia. This finding also suggests that desires and expectations may be conflated to some extent: individuals allow themselves to express a greater desire for children when they are partnered and when childbearing desires are therefore more likely to be realised.

The longer it takes to form a stable and secure relationship, the harder it becomes to realise fertility desires, and this may lead to revising downward the desire for additional children. One factor over which individuals have no control is age. The results presented here clearly show that both men and women revise their desire for additional children downward as they age into their 30s and 40s. Independent of other changes in life, women experience a decrease in their biological capacity to bear children as they pass the critical age of 35 years (Menken 1983). Women revise their desire for additional children downward when they are in their 30s and 40s, probably because they become more aware of the biological constraints on reproduction. This is evident, as shown earlier, in the greatest fall in desire for children being among those in their 40s who are childless or who have only one child. Such revisions may be facilitated by stories of high-profile individuals, in particular professional women, who regret being childless as a result of delaying childbearing. For instance, McDonald and Moyle (2010) argue that the gradual increase in Australia's TFR from the mid-2000s was partly due to the cessation of continued delay in childbearing, and that this was probably due to the wide media coverage given in the first half of 2000s to many professional women who regretted delaying childbearing for too long, resulting in childlessness or being unable to have as many children as they wanted (Crittenden 2001; Hewlett 2002; Cannold 2005; Haussegger 2005; Macken 2005).

Previous research in Australia has also shown that individuals' sense of economic and financial security is critical in making decisions on childbearing (Qu et al. 2000; Weston and Parker 2002; Weston et al. 2004; Lattimore and Pobke 2008; Drago et al. 2009; Holton et al. 2011; Evans and Baxter 2013; Gray et al. 2013). Economic uncertainty characterised by a weak labour market and poor working conditions is shown to influence fertility behaviour and intentions in other devel-

oped countries (Sobotka et al. 2010; Morgan et al. 2011). Results presented here showed that men's confidence in economic opportunity has a strong positive association with the change in desire for additional children. In other words, men in particular delay or avoid childbearing and reduce their desired number of additional children if they perceive insecurity and uncertainty in employment (Coale 1973; Coleman 1998, 2000; McDonald 2000a, b).

A leading explanation for low fertility is the mismatch between work and family life for women (McDonald 2000a, b; Morgan 2003). As women spend more years in education and employment, the opportunity costs of becoming a parent or having many children can become prohibitive. In societies that lack public or market mechanisms to minimise this cost, fertility declines to low or very low levels. By contrast, fertility is relatively high (albeit below replacement level) if there are social arrangements that enable women and men to combine work and childbearing (Esping-Anderson 1990; McDonald 2000a, 2006; Gauthier 2006; Neyer and Andersson 2006; Letablier et al. 2009). Our analysis of change in desire from 2001 to 2011 confirms that women who attach importance to having enough time and energy to further their careers are likely to report a decline over time in their desire for additional children, presumably as they adjust to the reality of conflict between work and family goals. That this finding is evident for individuals over time, regardless of differences *between* women with varying levels of career ambition, is important because it suggests that policy settings to mitigate the conflict between work and family could influence the individual aspirations of career-oriented women – contrary to the suggestion that women's family size preferences are fixed to a large degree, and that only family-oriented women are likely to respond to pronatalist policies (Hakim 2003, 2004).

A final finding of this research concerns the importance of children to individual identity. Those who consider that children provide more purpose in life, particularly women, are likely to report an increase in desire for additional children over time. This accords with the life course experiences of individuals in late modern societies in which people are driven by individualism, liberalism, and self-realisation (Inglehart 1977; Lesthaeghe and Moors 1996; van de Kaa 1997; McDonald 2000a, b; Hakim 2003, 2004). In a post-modern world characterised by economic, social and personal uncertainty and insecurity, in which individuals are motivated by a need to develop their own unique 'biography', it is argued that children provide some degree of certainty and routineness to daily life and may provide an anchor for the 'narrative of the self' (Giddens 1991; Beck 1992; Morgan 2003).

In conclusion, individuals' change in desire for children is shaped by: (i) relationship status; (ii) the stability and security of economic circumstances; (iii) the degree of compatibility between childbearing and advancement of career; and (iv) the role of children in creating and reinforcing individual identity, social connectedness and meaning. While not all the findings reported here are new, few studies have examined the importance of children as enablers of social connectedness and identity in changing desires for children. This research explored the change in desire within individuals over time. Future research can complement this by focusing on the differences between individuals in desire for additional children.

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Chapter 9
Fertility Differentials

Genevieve Heard and Dharmalingam Arunachalam

9.1 Introduction

The understanding that Australian fertility increased in the first decade of the twenty-first century (see Chap. 8) is based on change in the total fertility rate (TFR). Yet there is some debate on how this increase should be interpreted. Are Australian women having more children than they were previously? The TFR increase may simply reflect changes in the timing of childbearing. Cohort fertility data can provide a better measure of changing family size and of generational replacement (Myrskylä et al. 2012).

This chapter considers the cohort fertility rates of Australian women in the light of new data from the 2011 census. When presented as part of a time series, these data allow an assessment of change in the average number of children born to successive cohorts of women over successive years, as well as changes in the distribution of family sizes that lie behind these averages. Together with the survey-based analysis in Chap. 8, it affords a thorough overview of Australian fertility in the early twenty-first century.

This chapter further considers cohort fertility with regard to certain population characteristics that are recorded in the census. As in other developed countries, educational attainment is a strong determinant of fertility in Australia. The chapter evaluates the nature of this association in international perspective, and whether it is changing in the Australian context. Field of study and occupation are also considered, since recent literature points to the importance of these variables in determining fertility differentials (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010; Barakat and Durham 2013).

G. Heard (✉) • D. Arunachalam
School of Social Sciences, Monash University, Melbourne, Australia
e-mail: genevieve.heard@monash.edu; dharma.arunachalam@monash.edu

Past analysis of Australian census data has shown that the average number of children per woman also varies, sometimes substantially, according to income, relationship status, country of birth, and remoteness area (Heard 2007). The chapter provides an update on these patterns, with particular consideration as to whether educational differences might also explain some of these other variations.

Census Data on Children Ever Born

The value of census-based fertility data is best understood in terms of *stocks* and *flows*. The registration of births, on which the TFR is based (see Chap. 8), provides a summary of current childbearing. In other words, this data captures the *flow* of babies into the population. But flow information has its analytical limitations. For example, an increase in the TFR in any given year does not necessarily indicate that more children are being born to each family—it could be that positive economic circumstances are causing couples to bring forward childbearing that would have occurred eventually anyway.

In contrast, the census provides a quinquennial snapshot of the *stock* of the Australian population. It is this snapshot that allows discussion of proportions of the population in different categories. The question asking female respondents about their total number of live births provides data on completed fertility that can be used to calculate a cohort fertility rate (CFR). When presented as part of a time series, these data allow an assessment of change in the average number of children born to successive cohorts of women over successive years. CFRs can also be generated for sub-groups of the female population according to characteristics such as those discussed in this chapter: education, relationship status, or remoteness area, for example.

9.2   Theoretical Expectations

9.2.1   Trends in Cohort Fertility

Understandings of contemporary fertility patterns tend to be informed by the widely-used TFR. Yet demographers have long known that such measures of period fertility are distorted by changes in the timing of childbearing (Bongaarts and Feeney 1998). While this may not matter for the purposes of studying changes in the number of births year to year, it matters when the concern is the level of ultimate fertility implied by current childbearing. Prolonged TFR decline in the late twentieth century developed world occurred largely due to ever-later childbearing. Despite this, as numerous studies have now shown, underlying fertility levels remained stable in many countries, or did not decline as much as was suggested by period measures (Bongaarts and Feeney 1998; Hvidtfeldt 2010). New cohort fertility estimates for developed countries produced by Myrskylä et al. (2012) suggest that

family size has remained relatively stable in many countries designated 'low fertility' countries according to their TFRs.

Tempo effects have been acknowledged in the Australian context, both in terms of the prolonged decline in the TFR from 1963 to 2001, and in terms of its subsequent recovery (Lattimore and Pobke 2008). Nevertheless, Australian cohort fertility rates also declined in the late twentieth century, pointing to quantum effects over and above any tempo effects. Cohorts of women born from the late 1930s to the early 1960s finished their childbearing with progressively lower CFRs (ABS 2002; Heard 2007).

Whether or not we should expect any change in this pattern largely depends on what contemporary TFRs imply for completed fertility. To the extent that recent TFR increase reflects 'recuperation' (that is, women 'catching up' on births previously delayed) or 'anticipation' (women bringing forward births that they would have otherwise have had later), there may be no longer-term effect on cohort fertility rates as measured towards the end of the reproductive years. However, to the extent that recent TFR increase also reflects a quantum increase in family size, this increase will also show up in CFRs.

Lattimore and Pobke (2008) contend that quantum effects have indeed contributed to recent TFR increase, based on data from the large-scale longitudinal Household, Income and Labour Dynamics in Australia (HILDA) survey. Their analysis showed an increase of around 0.15 in the number of babies expected by younger women, with fewer anticipating childlessness, and with an increase in positive responses to questions about the desirability and likelihood of future children.

Some deceleration in decline in cohort fertility was indeed evident between 1996 and 2006, when compared to the preceding decade (Heard 2007). This chapter extends the time series to 2011 using data from the latest Australian census, before also considering educational and other fertility differentials over time.

9.2.2   Educational Fertility Differentials in Developed Countries

In the post-war era, it has been considered self-evident that greater opportunities for women in education and paid work have served to lower the incentives to motherhood, especially since the rise of women's economic independence in industrialized societies coincided with the declining fertility rates of the 'second demographic transition' (Van de Kaa 1987). These links were theorized by Becker (1981), who posited negative relationships between measures of women's socio-economic status and fertility, not only over time but between population sub-groups.

It is hypothesized that the negative relationship between female economic independence and fertility operates through the 'substitution effect'. Time spent by a woman looking after her child(ren) is time which cannot be used to earn money in the labour market (Ekert-Jaffé et al. 2002). Consequently, the cost of children is directly related to the cost of the mother's time, which equates to her foregone

earnings (Ermisch 1996). Women with greater earning potential face greater opportunity costs to childbearing, resulting in lower fertility.

Educational attainment is a common measure of female economic independence employed in the study of fertility differentials. Whereas labour force status and income often change upon entry into motherhood, educational attainment provides a proxy for earning potential, rather than current earning. Investment in education increases the value of a woman's time, and therefore the opportunity costs of having children.

This theoretical perspective is supported by a negative relationship between women's educational attainment and fertility that is evident in most countries (UN 2004: 65). The differences are largest in developing countries, as educated women tend to lead the shift toward lower fertility. In developed countries too, differences remain common between the fertility patterns of women with varying levels of education (Hoem et al. 2006b; Davie and Mazuy 2010). Kravdal's (1992: 459) survey of the literature generalized that 'every additional year of mothers' schooling leads to a reduction in the number of children she bears'.

Yet commentators have noted a weakening of this association over the past two decades. While a negative relationship persists in the majority of developed countries, differentials by education have diminished in many, including Canada, Belgium, Hungary, Latvia, Norway, Portugal, Slovenia, Spain and Sweden (UN 2004: 74; Kravdal and Rindfuss 2008). Several European and Scandinavian studies find that educational attainment now has only a small effect on completed cohort fertility (Andersson et al. 2009) or that educational differences in completed fertility have disappeared altogether: using the European Fertility and Family Surveys, Schoenmaeckers and Lodewijckx (2000) identify six countries (Finland, Norway, Belgium, France, Italy and Spain) in which degree-qualified women reach the end of their reproductive years with an average number of children that is equal to or higher than the average for women with high school qualifications.

Recent studies have drawn attention to field of study as an additional and important determinant of fertility (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010). While these studies have emphasized the association between field of study and childlessness (Lappegård 2005; Hoem et al. 2006a; Bagavos 2010), Hoem et al. (2006b) have extended the analysis to ultimate fertility, finding that field of education shows a stronger effect than level of education on the CFRs of Norwegian women. Barakat and Durham (2013) demonstrate that occupation is also an important source of variation in fertility differentials across Europe, although not as important as educational attainment.

9.2.3 Birth Order Specific Factors

To a large extent, educational fertility differentials appear to depend on factors specific to birth order. In developed countries, education affects fertility primarily through factors relating to the first birth (UN 2004: 70). Age at first birth varies substantially by education, as women with higher levels of education tend to delay

childbearing while they acquire qualifications and establish themselves in careers. Rates of transition to parity one also tend to be lower (in other words, childlessness is higher) among more educated women, often substantially so (Beets and Dourleijn 1999; Martin 2000; Kravdal and Rindfuss 2008).

There is limited evidence that educational differences in first order childbearing are diminishing: in France, for example, Davie and Mazuy (2010) identify signs of convergence in two indicators. Between 2000 and 2008, first-order childbearing declined for women without qualifications whilst rising slightly for women with degrees. Meanwhile, the mean age at first birth increased faster among the least educated, reducing the disparity between these groups.

However, where a narrowing of the educational divide has occurred, this has more often resulted from a weakening of the association between education and the transition to parity two or three. 'Somewhat unexpected' positive relationships have emerged between education and second or third births in Norway, Sweden and Germany (Kravdal 1992: 460; Kreyenfeld 2002; Kravdal and Rindfuss 2008). It has been demonstrated that positive effects such as these can depend on selection by earlier parity transitions (Kravdal 2001; Kreyenfeld 2002). That is, in some countries, more highly educated women who do become mothers are more likely than other women to progress to two or three children. As a consequence, the negative association between education and CFR in Norway, for example, has 'diminished sharply', due to reduced fertility among those with low education, slightly increased fertility among the most highly educated women, and stability for groups in between (Kravdal and Rindfuss 2008: 861).

9.2.4 Regime Specific Factors

Change in educational fertility differentials may be regime-specific to some extent. Many of the findings regarding diminishing educational fertility differentials relate to countries that may be classified as 'social-democratic' in terms of their welfare arrangements and the models of the family that these reflect (Esping-Anderson 1990), and these countries are often 'demographic forerunners' (Kravdal 1992). By contrast, the impact of education on fertility remains strongly negative in English-speaking countries including the US (Retherford and Luther 1996; Yang and Morgan 2003: 6; Frejka and Westoff 2006) and UK (Ekert-Jaffé et al. 2002). Indeed, McDonald and Moyle (2010) hypothesize that greater socio-economic inequalities, resulting in larger groups with low education, contribute to the current pattern of higher overall fertility in the 'liberal' English-speaking countries, including Australia.

Blossfeld (1995) finds that the impact of educational attainment on family formation varies across countries and theorizes that the strongest negative effect is to be expected where there is greater incompatibility between women's employment and family formation. Australia lags behind many European and Scandinavian countries in terms of institutional support for women seeking to combine work and family. On the other hand, McDonald and Moyle (2010: 270) argue that Australian government-funded services, though 'not as good as those provided in the social

democracies'…'are not small', and that financial support for childbearing is relatively generous, having improved substantially in recent years. It is therefore timely to track the changing effect of educational attainment on fertility in the Australian context.

9.2.5   Summary: Theoretical Expectations

Established economic theory, along with the results of previous Australian analyses, leads us to expect negative associations between fertility and measures of female economic independence, especially educational attainment. In keeping with recent findings from other developed countries, we look for signs that educational fertility differentials may be diminishing. However, we expect to find that educational fertility differentials remain strong in Australia, and indeed (as asserted by McDonald and Moyle (2010)), that the contribution of women with low educational attainment sustains Australian fertility at a level that is relatively high among developed countries.

Following recent studies highlighting the importance of field of education and occupation to fertility differentials in other countries (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010; Barakat and Durham 2013), we also briefly investigate these variables and their association with fertility in Australia.

Finally, we consider other differentials previously identified in Australian fertility, and the extent to which these may also reflect educational differentials. These variables are relationship status, family income, country of birth and remoteness area.

9.3   Data and Method

The analysis in this chapter is primarily based on data from the most recent (2011) Australian Census of Population and Housing. At the time of writing, these data were available in aggregate form only. The analysis that follows therefore relies on two- and three-way cross-tabulations and on CFRs and chi-square statistics that can be calculated on the basis of these cross-tabulations. Different methods (log-linear models) may be applied to these same data when individual-level records are released.

In the 2011 census, the question 'how many babies has she ever given birth to?' was asked of female respondents aged 15 years or more. Similar questions have been asked in 1981, 1986, 1996 and 2006, so that a 30-year time series (albeit with two ten-year intervals) is now available.[1]

The data from earlier census years used to create the time series (Tables 9.1, 9.2, and 9.3) comes from unit record files purchased from the ABS. The Persons Sample File (PSF) from the 1981 census contains data for a 1 % sample of unidentified

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[1] Since 1986, the ABS' policy has been to include the census question on total live births every 10 years only. As a result the question was omitted from the 1991 and 2001 Censuses (ABS 2012). However, due to budget constraints, the 2011 census form replicated the 2006 census form, and the question was included in both census years despite this policy.

persons. The Households Sample Files (HSFs) from the 1986 and 1996 censuses contain data for a 1 % sample of private dwellings (along with their associated family and person records) and a 1 % sample of persons in non-private dwellings on census night (ABS 1998). The resulting sample sizes were 145,763 for 1981, 156,302 for 1986 and 178,198 for 1996 (ANU 1984, 1990; ABS 1998). A customised file for 2006 contained a limited number of variables for all census respondents.

The level of detail on the census unit record files is collapsed for some variables to ensure the confidentiality of the data (ABS 1998). Of most concern here, responses at the higher end of the distribution of data for 'children ever born' were grouped (right censored) differently in each dataset: at 'seven or more' in the 1981 PSF, 'six or more' in the 2006 customised file, 'five or more' in the 1986 HSF, and at 'four or more' in the 1996 HSF. Right censoring presents a problem when the aim is to calculate a mean, because only the lower bound of the category and the number of cases within the category are known; the distribution of cases within the top category is unknown. The calculation of CFRs requires that any grouped number of children ever born be given a mean value (ABS 2004). Therefore, mean values for these top categories were established using another source from near the middle of the time series; the ABS' 1992 Survey of Families in Australia (SFA).[2] These means were then applied to the 1981 PSF, the 1986 and 1996 HSFs, and the 2006 customised file. This method assumed that the distribution of births at the higher orders was unchanged over the period in question, but verification using the uncensored 2011 data suggests that these calculations have remained accurate over time.

Cohort Fertility Rate (CFR)
A CFR is calculated as a simple arithmetic mean of the number of children born to women with different parities, within a specified age group or birth cohort:

$$CFR = (a + b*2 + c*3 + d*4 + e*5 + f*6....) / x$$

…where a is the number of women with one child, b is the number of women with two children, etc., and where x is the total number of women who responded (in this case) to the census question on the number of children they had ever borne. Independent variables may be introduced and means calculated separately for groups with one or more common characteristics.

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[2] The 1992 SFA unit record file is useful because its data on children ever born extended to birth order 'eight or more'. Using this information, it was calculated that women with 'seven or more' children (as recorded in 1981) had an average 8.0 children, those with 'six or more' (as recorded in 2006) an average 6.9 children, those with 'five or more' (as recorded in 1986) an average 5.7 children, and those with 'four or more' (as recorded in 1996) an average 4.6 children. According to the 2011 census data (also uncensored), these higher-order averages have changed very little over the 20 years between these collections.

Using these various data sources, it was possible to construct a time series of CFRs spanning 30 years, in order to examine change in cohort fertility (see Sect. 9.4). Change in educational fertility differentials was also examined (see Sect. 9.5). As in any trend analysis, comparability of data items can be problematic where questions have been changed or response categories altered over time. We therefore needed to create a classification for level of education that could successfully be applied to each of the census files for each of the years in question. This was a matter of finding a set of response categories that was common to each data file and census year. The final classification used is shown in Appendix 9.1.

The other variables of interest (field of study, occupation, income, relationship status, ethnicity, remoteness area) were then introduced and CFRs calculated separately for groups with one or more common characteristics. For the most part, analysis of these additional variables was limited to the 2011 data only.

Our data do not strictly permit us to investigate causality between any of these variables and fertility. Rather, we present descriptive data on the associations between these variables, in the form of tables and graphs. However, in interpreting these data, we tend to treat fertility as the dependent variable and all other variables as independent variables. This treatment is more easily justified with regard to fixed variables (most obviously, birthplace of women) than to those that may change over the life course. For example, the tendency to assume that educational attainment is an exogenous determinant of subsequent childbearing is subject to criticism (Lappegård and Rønsen 2005; Hoem et al. 2006b; Barakat and Durham 2013).[3] Here, we have little choice but to treat educational attainment (and other variables) in this manner, given the limitations of our cross-sectional census data. There is scope for further research on the relationship between these variables and CFRs in the Australian context using longitudinal survey data. However, the benefits of the available longitudinal data sources must be weighed against the coverage of the census.

9.4 Cohort Fertility Across Census Years

While the TFR has shown peaks and troughs over the decades as the timing of births changes, the CFR—measuring the average number of children ever born per woman—has shown steady decline. This decline is evident in each group across the reproductive years (Table 9.1). Women of all ages in 2011 had fewer children, on average, than did their counterparts in each earlier census year. Decline has not been uniform over the 30-year period. The last two columns in Table 9.1 reveal that the greater decline in the fertility of women aged 40–44 years occurred between 1981 and 1996, with decline between 1996 and 2011 occurring more slowly.

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[3] Education increasingly continues across the life course, and the causality may also work the other way, with fertility affecting educational attainment later in life (Lappegård and Rønsen 2005; Hoem et al. 2006b). Lappegård and Rønsen (2005) address this challenge using longitudinal data covering the entire population of Norway, while Hoem et al. (2006a, b) make use of a Swedish educational register.

Table 9.1 Cohort fertility rates of women aged 20–49 years[a], census years 1981–2011 and projected, 2016–2021

Age group (years)	Actual CFRs							Projected CFRs		Change 1981–1996	Change 1996–2011
	1981	1986	1991	1996	2001	2006	2011	2016	2021		
20–24	0.45	0.38	n.a.	0.28	n.a.	0.21	0.20	n.a.	n.a.	-0.17	-0.08
25–29	1.30	1.12	n.a.	0.79	n.a.	0.65	0.59	0.58	n.a.	-0.51	-0.20
30–34	2.03	1.89	n.a.	1.54	n.a.	1.30	1.23	1.17	1.16	-0.49	-0.31
35–39	2.43	2.24	n.a.	2.02	n.a.	1.81	1.78	1.71	1.65	-0.41	-0.24
40–44	2.78	2.46	n.a.	2.20	n.a.	2.05	1.99	1.95	1.89	-0.58	-0.22
45–49	n.a.	n.a.	n.a.	2.31	n.a.	2.14	2.06	2.00	1.97	n.a.	-0.25

n.a. not available

[a]Excludes women who did not state how many children they had (6 % of those aged 15–49 years in 2011; compared to 7 % in 2006, 5 % in 1996, 10 % in 1986 and 13 % in 1981)

9.4.1 Cohort Fertility at 40–44 Years

Demographers often work with the assumption that women have largely 'finished' their childbearing once they reach their early 40s. This assumption reflects recorded patterns of childbearing, along with the understanding that a woman's fecundity declines with age. Although increasing numbers of women bear children in their late 40s and beyond, many with the assistance of reproductive technologies, the proportional contribution of women aged 45 or more to current Australian fertility levels remains small (0.2 % in 2010) (ABS 2011a). For this reason, we too will focus on the CFRs of women aged 40–44 years as measuring near-complete family size, acknowledging that a remainder of this age group's childbearing must be forecast (see Sect. 9.4.3, Projected Cohort Fertility). The 5-year age group constitutes a large cohort that can then be disaggregated by other variables later in the analysis.

Women aged 40–44 years in 2011 had, on average, 1.99 children; a dramatic drop from the CFR of 2.78 recorded by women of the same age in 1981. This is the first cohort of Australian women to reach this age group with a fertility rate of less than 2.00 (although this cohort will yet add a little to this average—see Sect. 9.4.3). As such, it is also the first cohort to reach this age group without achieving replacement-level fertility (see Sect. 8.1).

Table 9.2 shows that the decline in completed fertility over recent decades is a result of change across the entire spectrum of family size. Smaller families have become more common at the expense of larger families. While the proportions of women reaching parity zero, one or two have increased over time, the proportions of women with three or more children continue to decrease.

Although these trends continued in the most recent 5-year period to 2011, the change in proportions at each parity was minor. Again, it is possible to discern that the more dramatic change occurred earlier in the 30-year period. For example, the proportion of women with four or more children at 40–44 years decreased from 28 to 19 % in just 5 years between 1981 and 1986. This was entirely offset by a 7 percentage point increase over the same 5-year period in the proportion of women with two children (from 29 to 36 %).

Two remains the most common number of children per woman, with 39 % of women aged 40–44 years in 2011 recording this number. This is an increase of only 1 percentage point over the 38 % recording two children in 2006 and in 1996, but represents an increase of 10 percentage points since 1981. The time series therefore suggests that the two-child family norm has only grown stronger over the decades.

Table 9.2 Parity distribution, women 40–44 years, census years 1981–2011

	Children ever born (%)					
	None	One	Two	Three	Four or more	Total
2011	17	14	39	20	10	100
2006	16	13	38	22	11	100
1996	13	11	38	25	13	100
1986	10	9	36	27	19	100
1981	9	8	29	27	28	100

Modal Family Size

The two-child mode is strong across many developed countries. The proportion of women completing their childbearing with two children has increased in most developed countries as proportions with higher parities have decreased (Frejka and Sardon 2007). In the US, Hagewen and Morgan (2005) demonstrate that the modal proportion nominating two children as 'ideal' has remained remarkably stable over the period 1970–2002.

The strength of the two-child family norm has also been noted in Australia (Parr 2007). Although the proportion of women with two children has increased in Australia, it remains relatively low compared to some developed countries, especially those countries with lower levels of fertility. The proportion of women born in 1960 who completed their childbearing with two children is as high as 55 % in the Czech Republic, 54 % in Romania and 42 % in the Netherlands (Frejka and Sardon 2007).

Compared to these and many other European countries, higher proportions of Australian women still progress to three or more children, thereby limiting the proportion at parity two. This is one important reason why Australia, along with other English-speaking countries, maintains fertility levels that are relatively high by the contemporary standards of developed countries (McDonald 2010).

Although the proportion of Australian women with three children by age 40–44 years continues to decrease, this remains the second-most popular family size, recorded by 20 % of women (down from 27 % in 1981). The proportion of women with four or more children has declined much more dramatically, from 28 % in 1981 to just 10 % in 2011.

Meanwhile, the proportion of women with one child increased further to 14 % (from just 8 % in 1981) and the proportion of women with no children increased to 17 % (from 9 % in 1981). Given the greater tendency for women without children to omit answering the census question on children ever born, these proportions may under-represent the true level of childlessness (ABS 1997; McDonald 1998).

9.4.2   Incomplete Fertility of Younger Cohorts

The primary disadvantage of using cohort fertility data is that, for younger women, childbearing is incomplete. Yet trends among younger woman are of great interest, given that the recent TFR increase (see Chap. 8) largely reflects the childbearing behavior of those who have not yet reached the end of their reproductive careers (Heard 2007).

Reading along the rows in Table 9.1, fertility decline is evident as successive cohorts reach each age group across the reproductive years. Again, at each age, the greater decline occurred between 1981 and 1996, and has since slowed. In the

younger age groups, decline testifies to the ongoing postponement of childbearing. Women aged 20–24 years in 2011 had on average 0.2 children, little changed since 2006, but less than half the average recorded by women of the same age in 1981. Women aged 25–29 years in 2011 had on average 0.6 children, also less than half the average recorded by women of the same age in 1981.

Yet the CFRs of women in the older reproductive age groups have also shown decline (of greater magnitudes, although proportional change grows smaller with age). This suggests that births postponed by younger women have not been recuperated. The age groups 25–29, 30–34, 35–39 and (as discussed above) 40–44 years recorded CFRs only marginally lower than in 2006, but 0.7–0.8 lower than in 1981.

9.4.3 Projected Cohort Fertility

It is also informative to read Table 9.1 diagonally, following specific cohorts of women as they age across census years. Such a reading allows projections for cohorts currently having children, based on the childbearing behavior of each preceding cohort. The projections shown in Table 9.1 suggest the following.

Despite nearing the end of their reproductive careers, women aged 40–44 years in 2011 are nevertheless likely to achieve an average family size of 2.0 children by the time they reach 45–49 years in 2016. This assumption is based on the fertility behavior of the cohort 5 years older: in 2006, women aged 40–44 years recorded a CFR of 2.05; an average which increased to 2.06 by the time this cohort reached 45–49 years in 2011. Their precedent suggests that women in the following cohort will likely also add 0.01, possibly more (depending on the extent to which any additional childbearing has been postponed rather than foregone), to their CFR by 45–49 years.

However, the same cohort (aged 40–44 years in 2011) will almost certainly be the first to record completed fertility that is below replacement level. At minimum, women aged 40–44 years in 2011 would need to have another 0.06 children, on average, in order for the cohort to reach replacement level fertility by 45–49 years. A gain of this magnitude is unprecedented at this age.

The cohort aged 35–39 years in 2011 is even less likely to achieve a CFR of 2.0 or more. Again, this assertion is based on the fertility behavior of the cohort 5 years older. Those aged 35–39 years in 2006 added 0.17 to their CFR by the age of 40–44 years in 2011. If the women in the cohort following add to their childbearing by the same amount over the 5 years to 2016, they will achieve a CFR of 1.95 by 40–44 years, and perhaps 1.97 by 45–49 years in 2021.[4]

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[4] These projections are based on age alone. They assume that mean age at childbearing, intervals between births and parity progression rates remain constant. McDonald and Kippen (2011) have proposed a more precise method of forecasting births using Australian data, taking into account parity progression and duration since previous birth as well as age, although results based on this method have not been published.

9.4.4 Summary

CFR decline continues, but decline has slowed. Because data on children ever born have been collected at irregular intervals, it is difficult to assess the pace of decline. However, for each age group considered, decline in the 5 years to 2011 was less than half the magnitude of decline in the 10 years prior. In turn, decline in the 15 years to 2011 was as much as half the magnitude of decline in the 15 years to 1996.

In keeping with findings based on measures of period fertility (Lattimore and Pobke 2008), the long-term decline in cohort fertility has all but ceased among younger Australian women—those aged 20–24 years in 2011, for example, recorded fertility comparable to those aged 20–24 years in 2006. This raises the possibility that completed cohort fertility may stabilize in decades ahead. In the short term, however, as women currently aged in their 30s complete their families, the decline in completed cohort fertility seems set to continue.

The CFRs so far discussed in this overview apply to all Australian women in the relevant age groups and may hide considerable differences between subgroups of the female population. In the remainder of the chapter, we consider many ways in which CFRs vary according to characteristics of women as measured by the census.

9.5 Fertility Differentials by Measures of Women's Economic Independence

9.5.1 Educational Attainment

The expected inverse relationship between educational attainment and fertility has been evident across census years in Australia (ABS 2001; Franklin and Tueno 2004; Tesfaghiorghis 2004; McDonald and Kippen 2009). As elsewhere, the lower fertility of more educated women is related to delayed childbearing and a higher proportion of such women remaining childless (Parr 2005; Miranti et al. 2009).

Fertility differentials by education remain stark in the 2011 census data (Table 9.3). Following a clear gradient, women without post-school qualifications

Table 9.3 Parity distribution by level of education, women 40–44 years, 2011

Level of post-school education	Children ever born (%)					Total	CFR
	None	One	Two	Three	Four or more		
Degree or higher	21	16	40	18	5	100	1.72
Diploma or skilled vocational	16	14	40	21	9	100	1.97
Basic vocational or other certificate	15	14	39	21	11	100	2.06
None	14	13	37	22	14	100	2.16

have the highest CFR at 40–44 years (2.16), followed by those with basic vocational or other certificates (2.06), and those with diplomas or skilled vocational qualifications (1.97). Degree-qualified women have the lowest CFR (1.72).

Yet it is also clear from the time series in Table 9.4 that educational differentials have abated over the past 30 years. In 1981, the difference between the CFRs of degree-qualified and unqualified women was 0.75. In 2011, this gap had reduced to 0.45. While CFRs declined across the spectrum of educational attainment over this period, the greatest decline occurred among women without post-school qualifications (−0.68 or −24 %), and the smallest among women with degrees or higher qualifications (−0.38 or −18 %). Indeed, the CFR of degree-qualified women was stable (+0.003) between 2006 and 2011.

The data on change over time challenge the assumption—sometimes explicit (Chafetz 1995), sometimes implicit—that fertility decline in the latter decades of the twentieth century was specific to educated women with high earning potential. Educated women may have led the decline towards sub-replacement fertility, but the greatest decline in Australian cohort fertility since 1981 has occurred where it might least have been expected; among those without post-school qualifications. Fertility trends among Australian women have therefore shared a common trajectory regardless of educational attainment, but women with less education have followed the lead of more educated women at some distance.

This notion is borne out in the data on parity distribution by level of education (Table 9.3). The parity distribution of women without post-school qualifications in 2011 is what the profile for all women might have looked like somewhere between 1996 and 2006 (see Table 9.2), with lower proportions stopping at the parities zero, one or two, and higher proportions progressing to the higher parities. Indeed, the CFR for unqualified women in 2011 (2.16) is close to the CFR for all women in 1996 (2.20).

Meanwhile, the parity profile of degree-qualified women more closely resembles that of women in countries where the transition to lower levels of fertility has 'progressed' further than in Australia. This pattern features higher proportions at the lower parities, lower proportions at the higher parities, and a greater concentration at parity two. Among women aged 40–44 years in 2011, degree-qualified women were the only group in which childlessness exceeded one fifth, and in which the proportion with three children was below one fifth. Meanwhile, the proportion at parity two was stable at 40 %.

Given that the CFR for degree-qualified women remained stable over the 5 years to 2011, educated Australian women may have reached an endpoint in their transition to low fertility—it is possible that current cohorts are not prepared to limit their fertility beyond this level. Alternatively, this may prove to be a turning point. The CFRs of educated women could feasibly increase if, for example, policy measures have succeeded in ameliorating the conflict between career and family goals.

Of course, the numbers and proportions of women in the various educational categories have also changed over the 30 years to 2011. Most notably, the ever-increasing number and proportion of women with degrees (see Table 9.4) mean that the impact of any decline in this group on national fertility has been growing.

Table 9.4 CFR and change in CFR by level of post-school education, women 40–44 years, census years 1981–2011

Level of post-school education	1981		1986		1996		2006		2011		Change in CFR 1981–2011	
	Women ('000)	CFR	Women ('000)	CFR	Women ('000)	CFR	Women ('000)	CFR	Women ('000)	CFR		
Degree or higher	11.3	2.10	22.6	1.82	95.7	1.86	151.3	1.71	206.5	1.72	−0.38	−18 %
Diploma or skilled voc.	27.5	2.55	36.1	2.29	76.1	2.15	141.6	2.01	182.6	1.97	−0.58	−23 %
Basic voc. or other cert.	37.9	2.59	50.6	2.21	29.6	2.24	33.2	2.06	32.4	2.06	−0.53	−20 %
None	278.5	2.84	283.2	2.56	374.0	2.35	341.0	2.20	300.9	2.16	−0.68	−24 %
'Top to bottom' gap	–	0.75	–	0.73	–	0.49	–	0.48	–	0.45	–	–

However, to focus on the behavior of the degree-qualified group is to miss the significance of fertility decline over recent decades among women without post-school qualifications. This remains by far the largest group.

9.5.2 Field of Study

As well as level of education, it is worth considering the role that field of study might play. Recent studies have found that field of education can be as important a predictor of fertility as level of educational attainment (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010). For example, Hoem et al. (2006b: 388) report clear educational differentials among Swedish women born 1955–1959; however, field of education shows a stronger effect than level of education, explaining more than twice as much of the variation in the CFRs.

All of these studies find that women educated for jobs in teaching or health care have less childlessness and considerably higher fertility than others (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010). Hoem et al. (2006b: 393) take this as evidence of 'education- and occupation-specific norms and preferences regarding family life'. Teaching and health care are caring, people-oriented occupations, the choice of which may indicate an orientation toward others that is associated with an orientation towards family life too (2006b: 385).

The Australian Census records 'the field of study of a person's highest completed non-school qualification' for those respondents with a post-school qualification (ABS 2011b). When the CFRs of women aged 40–44 years are analyzed by field of study, differences do emerge (Fig. 9.1). The highest CFR is recorded by women with qualifications in Food, Hospitality and Personal Services (2.03). In keeping with other studies, higher-than-average CFRs are also recorded by women with qualifications in Health (2.01) and Education (2.00). Lower-than-average CFRs are recorded by women with qualifications in each remaining field of study.

Differences by field of study remain when level of education is held constant. Women with degrees record lower-than-average CFRs, regardless of their field of study. Nevertheless, chi-square tests reveal a high level of variation according to field of study within this lower range (Table 9.5). Indeed, the chi-square tests show that field of study makes most difference to the CFRs of degree-qualified women (value = 5,523); more than to women in categories of lower educational attainment. Echoing the findings of the studies mentioned earlier—several of which differentiate by field of study only for women with degrees (Lappegard 2005) or tertiary qualifications (Bagavos 2010)—degree-qualified Australian women with qualifications in Health and Education record CFRs (1.94 and 1.93) considerably higher than degree-qualified women in any other field.

The chi-square statistics suggest that field of study is also associated with fertility differentials among women with diplomas or other skilled vocational qualifications, but makes relatively little difference to the CFRs of women with basic or certificate-level
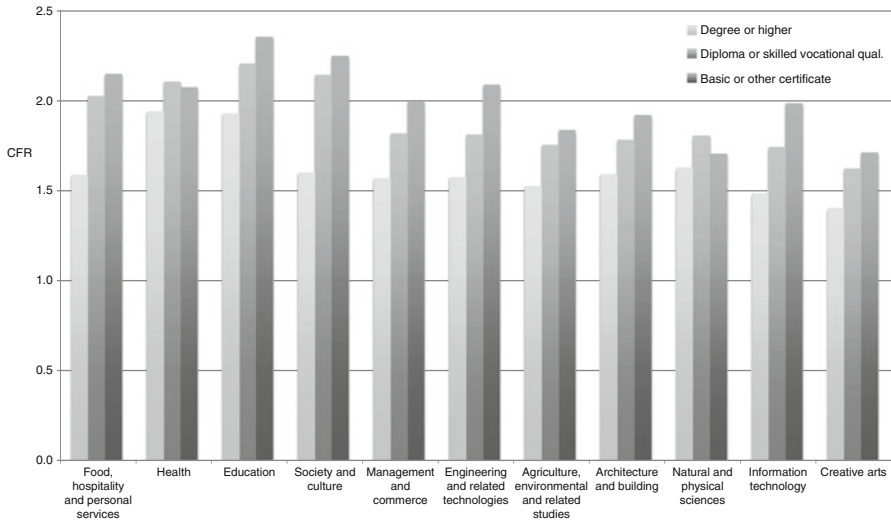
Fig. 9.1 CFR by field of study and level of post-school education, women 40–44 years, 2011

Table 9.5 Relationship between parity and selected variables controlling for level of post-school education, women 40–44 years, 2011

	Pearson chi-square value	Degrees of freedom	Valid cases
Level of post-school education[a] by field of highest qualification			
Degree or higher	5,523.234	40	200,177
Diploma or skilled voc.	3,587.600	40	176,099
Basic or other cert.	508.551	40	31,398
Level of post-school education by occupation			
Degree or higher	3,851.325	32	203,772
Diploma or skilled vocational	4,144.164	32	179,742
Basic or other certificate	1,142.135	32	32,023
None	15,213.430	32	294,563

'Number of valid cases' for the categories of educational attainment differs between chi-square tests shown. This is due to variation in the number of 'not stated' responses with regard to the second independent variable
[a]Excluding women with no post-school qualifications, since field of highest qualification is not recorded for these women

post-school qualifications. Within every field of study, women with lower-level post-school qualifications have higher average fertility than women with higher-level post-school qualifications. (Women with no post-school qualifications are excluded from this analysis, because there is no field of study recorded in these cases).
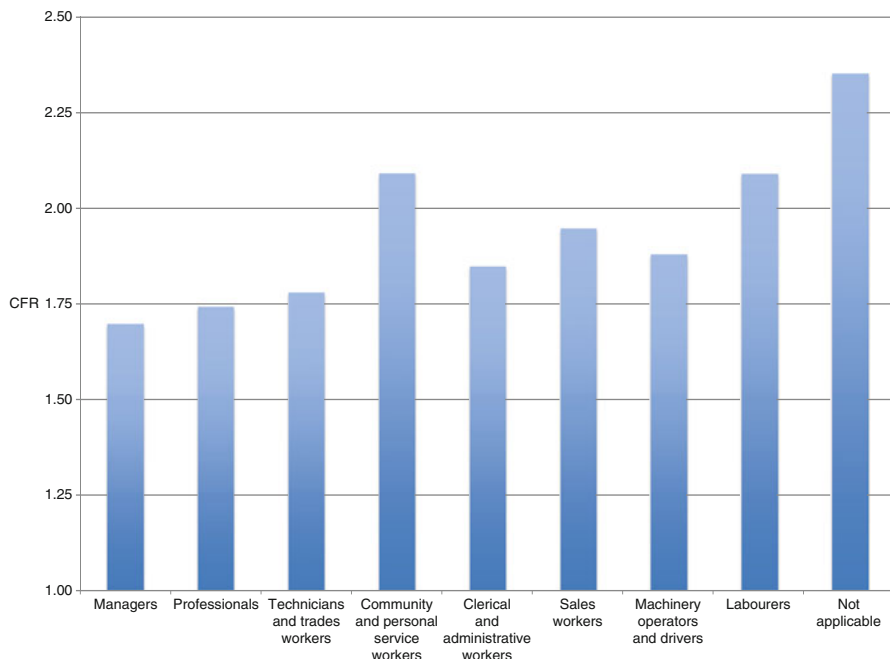
Fig. 9.2 CFR by occupation, women 40–44 years, 2011

9.5.3 Occupation

Although it is likely that women's choices regarding field of study are linked to their preferences regarding family formation, it is also hypothesized that fertility differentials by field of study (see Sect. 9.5.2) reflect the association between field of study and occupation (Lappegård 2005; Hoem et al. 2006a, b; Bagavos 2010). Different fields of education lead to different occupations and employment sectors, with working conditions that may be more or less compatible with childbearing and childrearing (Lappegård and Rønsen 2005: 34). So, for example, education for teaching and health care tends to lead to relatively stable employment in the public sector, where conditions and entitlements may favour childbearing.

When completed fertility is analysed by occupation (Fig. 9.2) using the Australian and New Zealand Standard Classification of Occupations (ANZSCO) (ABS 2009), the women with the highest mean CFR are those to whom the question on occupation is 'not applicable'. Clearly, women not in the labour force at the age of 40–44 years have had the most children. For many women, this labour force status will be directly related to their childbearing and child-rearing activities, serving to highlight the limits of cross-sectional data.

Otherwise, there is a negative relationship between occupation and CFR if occupation is considered a hierarchical variable. (The standard ANZSCO classification

is organized according to skill level and as such is broadly hierarchical.) With the exception of 'Community and Personal Service Workers', and to a lesser extent 'Sales Workers', the relationship between occupation and CFR follows a pattern whereby women in more highly skilled occupations have fewer children. This is not surprising, given the established relationship between educational attainment and CFR (see Sect. 9.5.1).

Yet there are exceptions, suggesting that the relationship between educational attainment and fertility may be modified by occupation as well as by field of education. The exceptions can help clarify the nature of this relationship. For example, why is the CFR of 'Community and Personal Service Workers' relatively high? There are clues in the finer groupings within the occupation classification. Within 'Community and Personal Service Workers', it is the largest category 'Carers and Aides' that has the highest CFR (2.3). This category includes several large groups with high fertility, including 'Education Aides' (2.4), 'Child Carers' (2.2) and 'Aged & Disabled Carers' (2.2). Each of these occupational categories is large and included more than 10,000 women aged 40–44 years in 2011 (Table 9.6).

As with field of study (see Sect. 9.5.2), we must consider the possibility that there exist 'occupation-specific norms and preferences regarding family life' (Hoem et al. 2006a, b: 393). Women who choose the caring, people-service occupations listed above may also be predisposed to choose the caring role of motherhood, and/ or to choose larger families. Additionally, some women in these female-dominated occupations are likely to work under awards that allow them flexibility in combining work and childbearing, and this may encourage higher fertility.[5]

Yet 'Hospitality Workers' (especially the 2,000 'Café Workers' with a CFR of 2.3) are another (somewhat incongruous) sub-category of 'Community and Personal Service Workers' with relatively high fertility. Hospitality roles may be classed as service occupations, but cannot be described as caring roles. Further, hospitality workers are often casual and among the least likely to enjoy family-friendly working conditions, suggesting that occupational variation in completed fertility is not easily explained by the conditions that usually attach to different occupational groupings. In this case, it is perhaps more likely that café work can be made to fit around the work of mothering.

An alternative explanation is that the level of skill attached to each occupation is key to the substantial fertility variation between occupations. The ANZSCO classification includes a code for the skill level predominating within each occupation listed. All the groups just discussed, which have higher fertility than may be expected considering their location in the classification, also have lower skill levels than others within their major occupational grouping (see Table 9.6). Once again, educational attainment is therefore an important variable to consider next.

Considering CFR by both occupation and educational attainment (Table 9.7) shows that the educational gradient in fertility remains abundantly clear within all occupational categories, in keeping with the findings of Barakat and Durham (2013).

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[5] In the Australian setting, an award is 'a legal document that sets out minimum wages and conditions for an industry or occupation' (Australian Government 2013).

Table 9.6 CFR by ANZSCO[a] Major Groups and selected sub-major and unit groups, women 40–44 years, 2011

Occupation (ANZSCO)	Women ('000)	Predominant skill levels[b]	CFR
1 Managers	64.2	1, 2	1.69
2 Professionals	145.0	1	1.74
3 Technicians and Trades Workers	24.7	2, 3	1.78
4 Community and Personal Service Workers	73.6	2, 3, 4, 5	2.09
41 Health and Welfare Support Workers	9.7	2	1.92
42 Carers and Aides	42.0	4	2.26
4211 Child Carers	10.5	4	2.17
4221 Education Aides	12.0	4	2.43
4231 Aged and Disabled Carers	10.5	4	2.21
4232 Dental Assistants	1.8	4	1.91
4233 Nursing Support and Personal Care Workers	6.3	4	2.23
4234 Special Care Workers	0.2	4	2.43
43 Hospitality Workers	8.2	4, 5	2.02
4311 Bar Attendants and Baristas	2.2	4	2.06
4312 Cafe Workers	2.0	5	2.28
4313 Gaming Workers	0.3	4	1.36
4314 Hotel Service Managers	0.4	3	1.68
4315 Waiters	2.9	4	1.95
4319 Other Hospitality Workers	0.3	5	1.76
44 Protective Service Workers	3.9	2, 3, 4, 5	1.66
45 Sports and Personal Service Workers	9.9	3, 4	1.77
5 Clerical and Administrative Workers	145.9	2, 3, 4, 5	1.85
6 Sales Workers	49.0	3, 4, 5	1.94
61 Sales Representatives and Agents	9.0	3, 4	1.69
62 Sales Assistants and Salespersons	31.5	5	2.01
63 Sales Support Workers	8.5	5	1.96
7 Machinery Operators and Drivers	8.8	4	1.88
8 Labourers	38.9	4, 5	2.09
Not applicable	229.4	n.a.	2.35
Total[c]	788.3	n.a.	1.99

[a]ANZSCO First Edition Revision 1 (ABS 2009)
[b]Skill level is defined as 'a function of the range and complexity of the set of tasks performed in a particular occupation' and is measured by the level of formal education and training, the amount of previous experience in a related occupation, and the amount of on the job training 'typically required to competently perform the tasks of a particular occupation'. Occupations at Skill Level 1 are most highly skilled; occupations at Skill Level 5 are least highly skilled (ABS 2006: 6–7)
[c]Total includes women whose occupation was 'not stated' or 'inadequately described'

('Professionals' are the single exception, but since the vast majority of professionals have degrees, unqualified professionals are anomalous to begin with).

Conversely, occupational variation remains when educational attainment is held constant, but the pattern of variation differs within each category of educational

Table 9.7 CFR by occupation (ANZSCO[a] Major Group) and level of highest post-school qualification, women 40–44 years, 2011

Occupation (ANZSCO[a] Major Group)	Women ('000)	Level of highest post-school qualification				
		Degree or higher	Diploma or skilled voc.	Basic or other cert.	None	Total
Not applicable	229.4	1.99	2.22	2.33	2.53	2.35
Community and Personal Service Workers	73.6	1.70	2.11	2.15	2.21	2.09
Labourers	38.9	1.61	2.02	2.16	2.14	2.09
Sales Workers	49.0	1.57	1.87	1.95	2.03	1.94
Machinery Operators and Drivers	8.8	1.50	1.80	1.80	1.93	1.88
Clerical and Administrative Workers	145.9	1.66	1.85	1.88	1.89	1.85
Technicians and Trades Workers	24.7	1.44	1.77	1.79	1.94	1.78
Professionals	145.0	1.72	1.84	1.77	1.67	1.74
Managers	64.2	1.46	1.74	1.87	1.90	1.69
Total[b]	788.3	1.72	1.97	2.06	2.16	1.99

[a]ANZSCO First Edition Revision 1
[b]Total includes women whose occupation was 'not stated' or 'inadequately described'

attainment. In other words, the effect of occupation is inconsistent across educational categories. Chi-square statistics (Table 9.5) show that occupation has by far the most influence over fertility among women with no post-school qualifications (value = 15,213). Occupation makes relatively little difference for women with post-school qualifications of any level.

9.5.4 Summary: Socioeconomic Fertility Differentials

Fertility differentials by educational attainment remain strong in Australia, at least for those women approaching the end of their reproductive years in 2011. These differentials are far from disappearing, as has been suggested with regard to some European and Scandinavian countries (Schoenmaeckers and Lodewijckx 2000). However, in keeping with the findings of the UN (2004), educational fertility differentials are diminishing in Australia, as they are in other developed countries. This is largely due to continuing fertility decline among women with less education. Meanwhile, the fertility of degree-qualified Australian women has ceased its long-term decline.

Field of education does affect fertility differentials between Australian women independently of level of education, particularly for more highly educated women. It does so in ways similar to those identified in previous studies, with women qualified in health and education-related fields recording particularly high levels of fertility. However, we cannot quantify *how much* field of education matters relative

to level of education. This will be possible once unit record file data is available from the 2011 census, enabling regression analysis.

It is perhaps unsurprising that field of study makes most difference to the completed fertility of degree-qualified women. Meanwhile, occupation makes most difference to the completed fertility of women without post-school qualifications. While there is interesting variation in completed fertility by occupation, it seems likely that this largely reflects variation by skill level, of which level of formal education is one important component.

9.6   Other Fertility Differentials

Measures of women's economic independence clearly remain important in accounting for Australian fertility differentials. Yet fertility may also vary according to many other population characteristics, some of which are explored below. It is likely that many of these intersect with educational attainment. We attempt to disentangle the effects of these variables from the effects of educational attainment using three-way cross-tabulations and chi-square statistics.

9.6.1   Relationship Status

Census Data on Relationship Status
In the Australian census there are two variables aimed at capturing relationship status. 'Relationship in household' records the relationship of each person to the family or household reference person. This is the variable that allows us to distinguish between wives in a registered marriage and cohabiting partners, including partners of the same sex. Lone parents are also counted.

There is another question on 'Registered marital status' which records an individual's current status under the categories 'Never married', 'Married', 'Separated', 'Divorced' and 'Widowed'. This question does not record cohabiting relationships or same-sex relationships, which cannot be registered in Australia (see Chap. 11), but does provide greater insight into individuals' relationship histories. Grouping the available categories allows us to distinguish between 'Ever married' and 'Never married' individuals.

It is generally well established in developed countries that cohabiting women tend to have fewer children than married women (Leridon 1990; Raley 2001; Pinnelli et al. 2002; Gray et al. 2006; Spéder 2006). Past analysis of 2006 Australian census data revealed the size of the gap was striking and increased with age: married

Table 9.8 Parity distribution and CFR by relationship status and marital status, women 40–44 years, 2011

Relationship in household and marital status	Women ('000)	Number of children (per cent)							CFR
		None	One	Two	Three	Four	Five	Six or more	
Wife	462.6	8	12	46	24	7	2	1	2.21
De facto, opposite-sex	73.9	22	19	33	16	7	2	2	1.82
Ever married	30.1	15	17	35	20	8	3	2	2.05
Never married	43.8	26	20	31	14	5	2	2	1.66
Lone parent	114.1	1	24	38	21	9	4	3	2.39
Ever married	83.1	1	20	41	23	10	3	2	2.44
Never married	31.0	2	35	30	17	9	4	4	2.26

women aged 40–44 had an average of 2.27 children, while cohabiting women of the same age had an average of 1.83 children (Heard 2007).

In this analysis of 2011 data we have considered more categories of 'Relationship in household' and in conjunction with the 'Registered marital status' variable. Perhaps unsurprisingly, ever-married women have more children than never-married women at every age (data not shown).

It remains the case that married women have a higher average CFR (2.21) than women in de facto relationships (1.82) at 40–44 years (see Table 9.8), although the difference is smaller than in 2006. Interestingly, however, women who are lone parents at age 40–44 have more children, on average (2.39), than women in either kind of relationship. Within each of these groups, the highest CFR is recorded by ever-married women. Thus, the highest fertility of all groups (2.44) is recorded by lone mothers who were once married but who were separated, divorced or widowed at the 2011 census.

The parity distributions that contribute to these averages vary considerably. Lone mothers are less likely than wives to have two or three children, but their average fertility is highest because they are *more* likely than wives to achieve any other parity. In addition, almost by definition, there are very few lone mothers with no children of their own—although even when the analysis is restricted to women with at least one child (that is, excluding parity zero), lone mothers still record higher average fertility than wives (data not shown).

Women living in de facto relationships at age 40–44 years are, like all groups, more likely to record two children than any other family size (33 %). However, their considerably lower fertility is achieved through a much higher proportion remaining childless, and relatively low proportions with two or three children. This is largely due to the parity distribution of never-married partners, who are the majority among cohabiting women. Interestingly, the parity distribution of cohabiting women who had been married is closer to that of married women, resulting in a higher average fertility rate (2.05) that is also closer to that of married women.

These data raise some fascinating questions. Most obviously, why do lone mothers—both ever- and never-married—have higher average fertility than do

Table 9.9 CFR by relationship status and level of post-school education, women 40–44 years, 2011

Level of post-school education	Wife	De facto partner, opposite sex	Lone parent
Degree or higher	2.05	1.35	1.94
Diploma or skilled vocational	2.19	1.75	2.30
Basic or other certificate	2.26	1.92	2.46
None	2.35	2.09	2.58

wives? It is possible, but unlikely, that those in the least stable relationships have the most children. Alternatively, it may be that larger families generate more relationship strain. Using census data, it is impossible to establish the order of events in individuals' lives, and therefore we can only speculate as to causality.

However, it is more likely that relationship status is an intervening variable, and that fertility differentials by relationship status primarily reflect the established relationship between educational attainment and fertility. To put it another way, educational attainment is likely to be the more important independent variable affecting both relationship and fertility outcomes (Heard and Dharmalingam 2011).

Table 9.9 shows that considerable differences by relationship status remain when educational attainment is held constant. This suggests that relationship status affects fertility independently of educational attainment. And yet the association between relationship status and fertility differs within each category of educational attainment. Within every category of educational attainment, de facto partners have the lowest CFRs. However, among women without degrees (those with diplomas, vocational qualifications or no post-school qualifications), lone parents have higher CFRs than either wives or de facto partners. Their numbers (not shown) ensure that this is the dominant pattern when all women are considered together.

By contrast, degree-qualified women exhibit a different pattern. Among women with degrees, those in registered marriages record the highest CFR; 0.7 higher than that of women in de facto relationships. Indeed, the range is widest among women with degrees. The range decreases along with level of educational attainment and is smallest among women with no post-school qualifications. This is borne out in the chi-square statistics which show that relationship status makes most difference to the family size of women with degrees (Appendix 9.2).

These observations suggest that the normative link between marriage and childbearing is strongest for degree-qualified women, 69 % of whom are married at 40–44 years (data not shown). Indeed, degree-qualified women achieve an average in excess of two children each (2.05) *only* when they are married. Among women with lesser qualifications or no qualifications, it seems that relationship status is less important to childbearing. Women with no post-school qualifications record an average CFR above replacement level regardless of relationship status.

Married women have a similar parity distribution regardless of their level of education (data not shown). The higher fertility of married women with low levels of education is achieved by slightly lower proportions having two or fewer children, and slightly higher proportions having three or more—but nevertheless, the combined

proportions having the normative two or three children are remarkably constant at 69–71 % across the educational spectrum.

By contrast, the parity distribution of lone parents differs considerably according to educational attainment. Lone parents with degrees are concentrated at parity one (35 %) and parity two (42 %). At the other extreme, lone parents with no post-school qualifications are much more likely to have progressed to higher parities, with as many or more women at parity three (23 %) or parity four or more (20 %) as at parity one (20 %).

These findings fit with a body of literature, by now substantial, that associates marriage with privilege in developed societies (Blossfeld 1995; Bracher and Santow 1998; Kravdal 1999; Goldstein and Kenney 2001; Lichter et al. 2002; Huston and Melz 2004; Kalmijn and Luijkx 2005; Kalmijn 2007; Cherlin 2009) including Australia (Birrell et al. 2004; Heard 2011; Hewitt and Baxter 2012). While a weakening of the link between marriage and childbearing has long been identified as a feature of the second demographic transition, it has become clear that this link is weakest among those with low levels of education.

9.6.2 Ethnicity

In countries that receive large numbers of migrants, substantial fertility differences are often evident between women according to birthplace. In several major receiving nations, such as the UK, immigrants have higher fertility than the native-born (Office for National Statistics 2012).

Other examples show that this phenomenon depends on the source countries in question. US national fertility is boosted by the contribution of Hispanic women (United States Census Bureau 2012). However, in Canada, immigration from the low-fertility Asian countries tends to mean that overall fertility is lowered by immigration (McDonald and Moyle 2010).

In Australia, the difference between the period fertility rates of native- and overseas-born women has been small in recent decades, and the two have crossed paths several times (ABS 2002). At the 2006 census, however, Australia-born women recorded higher cohort fertility than immigrant women across all age groups (Heard 2007).

Table 9.10 shows that little had changed by 2011: without the average-lowering contribution of immigrant women, Australia-born women aged 40–44 years exceeded two children each (2.01). Their CFR was higher than that of immigrant women, whether born in the 'main English-speaking countries' (UK & Ireland, US, Canada, New Zealand and South Africa) or in other countries. Indeed, there is very little difference in fertility between these broad categories (1.93 and 1.92 respectively).

As might be expected, however, there is substantial variation between birthplace groups *within* these immigrant categories (Table 9.10). If all birthplace groups are ordered from highest to lowest in terms of their CFR in Australia, women born in

Table 9.10 CFR by country of birth[a], women 40–44 years, 2011

	Women ('000)	CFR
Australia	**519.2**	**2.01**
Main English-speaking countries	**84.8**	**1.93**
UK & Ireland	47.3	1.89
New Zealand	23.5	2.04
South Africa	8.6	1.95
United States of America	3.4	1.72
Canada	2.1	1.69
Other countries[b]	**184.3**	**1.92**
China (excludes SARs and Taiwan)	16.2	1.42
Vietnam	12.5	1.87
Philippines	11.5	1.84
India	9.0	1.78
Malaysia	4.9	1.67
Lebanon	4.5	3.19
Korea, Republic of (South)	4.2	1.64
Sri Lanka	4.0	1.83
Fiji	3.4	1.95
Japan	3.2	1.30
Thailand	3.2	1.34
Germany	3.1	1.60
Indonesia	3.1	1.65
Turkey	2.5	2.25
Hong Kong (SAR of China)	2.5	1.30
Papua New Guinea	2.4	2.10
Iraq	2.4	2.80
Singapore	2.2	1.67

[a]Birthplace groups listed separately are those with 2,000 or more women aged 40–44 years living in Australia
[b]Total 'other countries' includes all countries other than Australia and the main English-speaking countries listed separately

African countries occupy all but one of the top ten positions (data not shown). Many of these birthplace groups are very small, such that their high average fertility, albeit interesting, will have little impact on Australia's fertility. Among the larger of these groups, Sudanese (3.92), South Sudanese (4.72) and Somali women (4.38) recorded particularly high fertility.

Women from Afghanistan (3.83) also display high fertility, as do larger immigrant groups from a number of Middle Eastern countries of origin (Lebanon 3.19; Iraq 2.80). Finally, Polynesian women feature strongly among those immigrants with particularly high fertility in Australia (Tonga 3.45, Samoa 3.33, Cook Islands 3.32).

There are very few western birthplace groups with higher CFRs than Australia-born women (2.01). Exceptions are women from Norway (2.06) and New Zealand

(2.04). All remaining western birthplace groups have lower fertility, with women from most of these nations recording CFRs between 1.6 and 2.0 (e.g. UK & Eire 1.89; US 1.72; Germany 1.60).

Also in this range are the CFRs of most of the larger Asian immigrant groups: Vietnam (1.87); the Philippines (1.84); India (1.87). Asian countries then also dominate among those birthplace groups recording very low CFRs in Australia: China (1.42); Thailand (1.34); Hong Kong and Japan (each 1.30).

For the most part, the variations described above reflect fertility differences in the countries of origin. This is not surprising, since about a third of immigrant women aged 40–44 years in 2011 had arrived in the decade prior to the census (data not shown), and are likely to have completed some or all of their childbearing before arriving in Australia. To some extent, differential fertility patterns will also reflect births to immigrant women following their arrival in Australia. Nevertheless, immigrant women are likely to bring with them a variety of norms regarding family size.

Censuses are conducted in different years and at different intervals in different countries, making it difficult to compare the CFRs of groups of immigrant women in Australia with their counterparts of the same age in their countries of origin. Nevertheless, comparable data has been sourced from the Human Fertility Database (2012) for some European countries, the UK and the US. In order to make comparisons for some countries using this database, it is necessary to refer to cohorts of women born earlier (by 2 years, in most cases) than those in our reference group (migrant women in Australia who were aged 40–44 years in 2011, i.e. born 1967–1971). Additionally, the work of Myrskylä et al. (2012) provides CFRs for a wider range of developed countries. These are also imperfect for our comparative purposes since they relate to single-year birth cohorts. However, for most countries included in both sources, the Myrskylä et al. CFRs for women born in 1970 are close to the rates sourced from the Human Fertility Database.[6]

Using either or both of these sources, Table 9.11 shows that the CFRs of groups of migrant women in Australia are mostly close to the CFRs for women of a similar age in the relevant countries of origin. This pattern changes little if we exclude women who arrived in Australia after 2006; that is, women who were aged 35–39 or more upon arrival, who were thus likely to have commenced their childbearing in their country of origin (data not shown). Only women from Italy and the US have CFRs in Australia that differ by more than 0.3 from the CFRs of their counterparts in their birth countries. We may discount the gap for the US due to the aforementioned ethnic fertility differences within that country—it is likely that US immigrants to Australia are disproportionately non-Hispanic whites, whose fertility is lower than the fertility of Hispanic women and non-Hispanic black women in the US.

Of greater relevance here, it is also probable that migration to Australia from all source countries is selective of more educated women. Given Australia's emphasis on skilled migration, migrants are disproportionately likely to be drawn from the

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[6] The greatest difference is between the CFR for US women born 1963–1967 according to the Human Fertility Database (2.06) and the CFR for US women born in 1970 according to Myrskylä et al. (2.11).

Table 9.11 CFRs of migrant women in Australia compared to CFRs in their countries of birth

Country of birth	Cohort in Australia aged 40–44 years in 2011		Closest cohort in country of birth (HFD)		1970 birth cohort in country of birth (Myrskylä et al.)	Difference between CFR in Australia & in country of birth (using Myrskylä et al.)
	Women ('000)	CFR	Cohort	CFR	CFR	
Netherlands	1.4	1.87	1965–1969	1.75	1.76	0.11
Germany	3.1	1.60	1966–1970	1.48	1.52	0.08
UK	44.8	1.89	1965–1969	1.88	1.91	−0.02
Canada	2.0	1.69	1963–1967	1.75	1.78	−0.09
Russian Federation	1.0	1.56	1966–1970	1.62	1.61	−0.05
France	1.1	1.74	1965–1969	1.99	2.00	−0.26
USA	3.3	1.72	1963–1967	2.06	2.11	−0.39
Greece	1.2	1.84	n.a.	n.a.	1.64	0.20
Italy	1.8	1.83	n.a.	n.a.	1.48	0.35
Japan	3.2	1.30	n.a.	n.a.	1.48	−0.18
New Zealand	23.2	2.04	n.a.	n.a.	2.17	−0.13
Poland	1.3	1.70	n.a.	n.a.	1.85	−0.15
Singapore	2.2	1.67	n.a.	n.a.	1.59	0.08
Taiwan	1.1	1.48	n.a.	n.a.	1.73	−0.25

Human Fertility Database (2012) and Myrskylä et al. (2012); *n.a.* not available

more educated segments of their societies of origin—and, as demonstrated already, more educated women have fewer children, on average. This may help account for the cases in which immigrant women's CFRs in Australia are lower than the CFRs in their countries of birth (Canada, France, Russian Federation, Japan, Poland, New Zealand, Taiwan). It may also help explain why, as a group, women born outside of Australia have lower fertility than the Australia-born.

Table 9.12 confirms that among women who were aged 40–44 years at the 2011 census, the overseas-born were more likely to be degree-qualified and less likely to have no post-school qualifications than their Australia-born counterparts respectively. Thirty-two per cent of migrants born in the main English-speaking source countries and 36 % of migrants born in other countries were degree-qualified, compared to 26 % of the Australia-born. Conversely, only 36 % and 39 % respectively of women in these migrant groups had no post-school qualifications, compared to 43 % of the Australia-born.

The educated profile of migrant women in Australia *may* explain the lower fertility of these women relative to women in some of the relevant countries of birth. This is difficult to establish, since CFRs by educational attainment are not readily available for all countries, and since educational qualifications are not necessarily comparable across countries in any case.

The more educated profile of migrant women *does not* fully explain the lower fertility of these women relative to Australia-born women. Holding educational

Table 9.12 CFR by level of post-school education and birthplace, women 40–44 years, 2011

Level of post-school education	Australia		MESC		Other	
	Women (%)	CFR	Women (%)	CFR	Women (%)	CFR
Degree or higher	26.0	1.77	31.8	1.70	35.6	1.59
Diploma or skilled vocational	25.9	2.00	28.1	1.92	21.7	1.88
Basic or other certificate	4.8	2.07	4.0	2.02	3.7	2.04
None	43.3	2.16	36.1	2.11	39.0	2.22
Total[a]	100.0	2.01	100.0	1.92	100.0	1.92

MESC Main English-Speaking Countries

[a]Total excludes women whose qualifications were inadequately described or not stated. This was 5 % of all women 40–44 years but as high as 21 % among women whose birthplace was 'Other' (non-MESC)

attainment constant, differences in completed fertility by birthplace remain. Among women in the two highest educational attainment categories ('Degree or higher' and 'Diploma or skilled vocational qualification'), Australia-born women have the highest CFRs, followed by women from the main English-speaking source countries. Chi-square statistics suggest that country of birth has most bearing on the fertility of degree-qualified women (value = 3,704) (Appendix 9.2).

At the other end of the spectrum of educational attainment, among women with no post-school qualifications, the pattern is different: overseas-born women from outside the main English-speaking countries record the highest CFR.

9.6.3 Family Income

A Beckerian theoretical perspective (see Sect. 9.2.2) leads to the expectation that female income, being a measure of economic independence, will be negatively associated with fertility. However, individual women's income is a problematic variable in the analysis of fertility differentials. This is because women so often reduce their labour force participation or leave the workforce altogether while they are bearing and raising children. For this reason, we have considered *family* income in the analysis below. Family income will also be affected by the income of mothers, but may better capture the financial circumstances of the family unit as a whole.[7]

Figure 9.3 shows a clear trend whereby the CFRs for women aged 40–44 years in 2011 decrease as family income increases. In other words, the higher the family income, the lower the average number of children per woman. The exception to this pattern is that women in families with negative or nil income recorded lower average fertility than women in the lowest family income groups. We speculate that families may fall into the negative or nil income categories as a consequence of investments and/or tax minimization, but in social and demographic terms may have more in common with higher income families.

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[7]Using census data based on place of enumeration (as opposed to place of usual residence, used otherwise), it is possible to cross-tabulate individual women's CFRs by their family income.
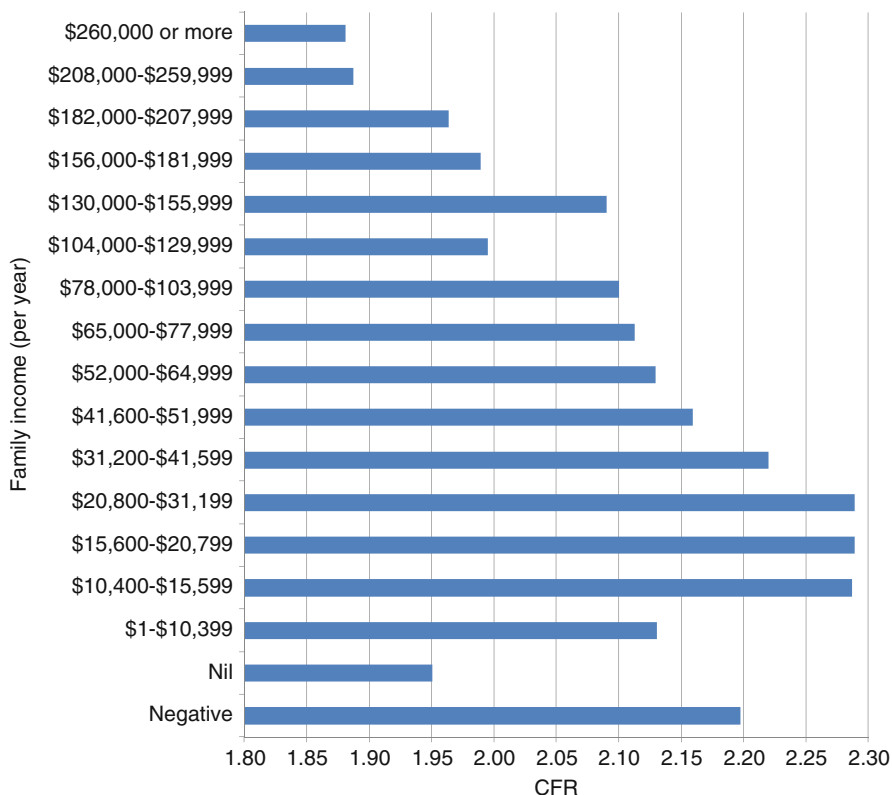
Fig. 9.3 CFR by family income, women 40–44 years, 2011

It is notable that women in three of the lowest family income groups (with incomes between $10,400 and $31,199 per year) share the highest average CFR of 2.29 children per woman. Families reliant on welfare payments alone in 2011 fell into one of these three income categories (Australian Government 2012). Women in these family income categories differ across the spectrum of family sizes (data not shown): they are considerably less likely to be childless, but are more likely than women in other family income groups to have one child only, or to have larger families of four or more children.

By contrast, it is among women in higher income families that the norm of two or three children is most evident. The proportion of women with two children in families with incomes of $65,000 or more (likely to include middle-class families with a professional wage-earner) is more than 40 %, closer to half in some income categories. Including women with three children accounts for around two-thirds of those who fall into these higher family income categories. Women in these higher family income categories are the least likely to have larger families (four or more children).

The relationship between family income and fertility appears to hold along geographic lines, too (Table 9.13). When grouped according to area (using the ABS' geographic classification SA2), women aged 40–44 in the areas with the lowest

Table 9.13 CFR by quintile of SA2[a] according to median family income[b], women 40–44 years, 2011

Family income quintile of SA2	Women ('000)	Number of children (per cent)					CFR
		None	One	Two	Three	Four or more	
1	169.3	21	15	40	18	6	1.76
2	167.8	16	15	41	19	8	1.92
3	160.5	16	15	40	20	10	2.00
4	150.5	15	14	37	21	12	2.09
5	138.5	15	13	34	22	16	2.22

[a]The ABS' SA2 regions have an average population of about 10,000. There are about 2,200 SA2s in Australia (ABS 2013)
[b]SA2 regions were ranked by median family income and grouped so that each quintile contained as close as possible to 20 % of the *total* population. The proportion of women aged 40–44 years in each quintile ranges from 18 to 20 %

Table 9.14 CFR by level of post-school education and family income, women 40–44 years, 2011

Level of post-school education	$1–$41,599	$41,600–$103,999	$104,000–$207,999	$208,000+
Degree or higher	1.82	1.88	1.93	1.78
Diploma or skilled vocational	2.14	2.10	2.04	1.96
Basic or other certificate	2.25	2.17	2.08	2.09
None	2.43	2.26	2.14	2.15

median family income had the highest mean CFR. Following a clear gradient, women in areas with the highest family income had the lowest mean CFR. The difference between the means of the lowest and highest quintiles is 0.46. This suggests that fertility differentials are related to socioeconomic environment, in addition to the incomes of families.

In theory, earning power reflects skill and knowledge. We would therefore expect that income reflects educational attainment, and that there would be a close positive relationship between the two. Even at the family level, we may expect income to be positively related to the educational attainment of the adult members of the family. Therefore, we might expect the relationship between family income and fertility to be mediated by the educational attainment of either or both partners. To what extent does the negative relationship between family income and CFR merely reflect the established negative relationship between women's educational attainment and fertility (see Sect. 9.5.1)?

Table 9.14 shows that family income differentials persist even after controlling for women's educational attainment. (We have excluded women whose family income was 'Negative' or 'Nil', for reasons mentioned earlier). Among women whose post-school qualifications were 'None', 'Basic or other vocational' or 'Diploma or skilled vocational', a clear negative relationship between family income and CFR is evident. Chi-square statistics suggest that family income affects fertility most for women without post-school qualifications (value = 3,826) (Appendix 9.2).

Although the pattern is less clear among degree-qualified women, those in the highest family income category still have the lowest CFR. Regardless of family income category, degree-qualified women have lower average fertility than women in the next highest category of educational attainment (Diploma or skilled vocational qualifications).

Table 9.15 CFR by remoteness area, women 40–44 years, 2011

Level of post-school education	Major cities	Inner regional	Outer regional	Remote	Very remote	Total
Degree or higher	1.67	1.93	1.93	1.90	1.87	1.72
Diploma or skilled vocational	1.89	2.14	2.16	2.17	2.30	1.97
Basic vocational or other	1.96	2.24	2.33	2.35	2.63	2.06
None	2.07	2.33	2.38	2.50	2.65	2.16

9.6.4 Remoteness Area

In many countries, both developed and developing, there are differences between the fertility patterns of urban and rural women (Kulu 2013). Past analysis has shown that the CFRs of women living in Australia's capital cities are considerably lower than those of other Australian women (Heard 2007).

Australian census data is released by a number of geographic variables, one of which is Remoteness Area. This classification groups statistical areas sharing a particular degree of remoteness, defined by access to services and measured by distance to the nearest urban centre (ABS 2013).

A clear positive relationship between remoteness and fertility has previously been reported (ABS 2002) and appears to remain straightforward. As shown in Table 9.15, women aged 40–44 years in 2011 who were usually resident in Australia's Major Cities had the lowest CFR of 1.89. This is the largest group of women (560,400 in 2011), and the only group with a CFR below the average for all women aged 40–44 years. Women living in Inner Regional, Outer Regional, Remote and Very Remote Australia recorded progressively higher CFRs, all of which are above the average for all women aged 40–44 years. The highest CFR, recorded by the relatively small number women usually resident in Very Remote Australia (6,100 in 2011), was 2.48.[8]

When educational attainment is included (Table 9.15), it becomes evident that this straightforward relationship between remoteness area and CFR applies only to women with lower educational qualifications, and not to those with degrees. Chi-square statistics (Appendix 9.2) confirm that remoteness makes most difference to the fertility of women without post-school qualifications (value=3,587).

The chi-square statistics also show that educational attainment makes much more difference to the fertility of women living in Australia's Major Cities (value=9,276) than it does to the fertility of women living in regional and remote areas (data not shown). Here, a clear gradient exists, with educational attainment becoming less important as remoteness increases. Educational attainment makes least difference to the fertility of women living in Very Remote Australia (value=146).

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[8] In the Australian setting, it is important to consider the extent to which urban-regional differences in completed fertility reflect differences between Indigenous and non-Indigenous fertility, since the proportional contribution of Indigenous mothers varies from just 1 % in the Major Cities of Australia to 45 % in Very Remote Australia. Indigenous fertility is explored in detail in Chap. 10.

9.7   Conclusion

Overall, cohort fertility rates have continued a long decline, but this decline has slowed considerably in the 30 years to 2011. Among younger Australian women, it has all but ceased.

Over the same period, educational fertility differentials have diminished. The time series shows that this is largely due to the slowing and ultimate stabilization of CFR decline among degree-qualified women. It remains to be seen whether the fertility of less educated women will also plateau. It could be that educational differences, albeit smaller, persist; or it could be that fertility decline among less educated women continues to decline, rendering educational differences negligible (as has occurred elsewhere).

Socioeconomic disadvantage shows up in fertility differentials using a number of different independent variables. Women with lower levels of education or lower family incomes, along with those who are lone parents or who are living in more remote areas of Australia, all record higher CFRs. The higher fertility of these groups is achieved through a common parity distribution featuring low levels of childlessness, and relatively high proportions of women having one child or 4+ children.

By contrast, degree-qualified women, married women, city-based women and those with higher family incomes record lower CFRs. Lower fertility is commonly achieved by higher levels of childlessness, but also through a strong concentration of women around parities two and three, limiting the proportions that progress to higher parities.

This analysis considered educational attainment alongside each other variable considered. Doing so generates the conclusion that degree-qualified women are distinctive in their fertility patterns. For example, it is only among degree-qualified women that married women have the highest fertility. Other associations hold for all groups of women *except* those with degrees. Among women without degrees, there are clear positive relationships between occupational status and CFR, between family income and CFR, and between remoteness area and CFR.

Limited as it may be by the cross-sectional nature of the data, this analysis provides some support for recent arguments for attention to field of study. Field of study best accounts for fertility differentials among women with degrees, who are growing in number. Yet its importance is perhaps reduced given the likelihood that the direction of future CFR change will be determined by less educated women.

Diminishing fertility differentials by education suggest fertility decision-making is more complex than Beckerian economics implies. Even assuming a rational choice model in which the decision to have a child is cost-benefit calculation, opportunity costs are likely to extend beyond a woman's earning potential to include institutional factors, such as the ease with which it is possible to combine childbearing and childrearing with workforce participation. Further, there may be structural constraints, such as rates of union formation and dissolution, which may also vary across socio-economic groups. And finally, there are cultural factors, such as norms regarding family size, which may also vary over time and between groups but which are not captured by an instrument such as the census.

Appendices

Appendix 9.1

Table 9.16 Census classifications for level of post-school education (ANU 1984, 1990; ABS 1998, 2007, 2011)

Census 1981	Census 1986	Census 1996	Census 2006	Census 2011	Final classification
Qualification Level	*Qualification Level*	*Post-School Educational Qualification: Level of Attainment*	*Non-school Qualification: Level of Education*	*Non-school Qualification: Level of Education*	*Non-school Qualification: Level of Education*
Higher degree	Higher degree	Higher degree	Postgraduate degree	Postgraduate degree	Degree or higher
Graduate diploma	Graduate diploma	Postgraduate diploma	Graduate diploma and graduate certificate	Graduate diploma and graduate certificate	
Bachelor degree	Bachelor degree	Bachelor degree	Bachelor degree	Bachelor degree	
Diploma	Diploma	Undergraduate diploma	Advanced diploma and diploma	Advanced diploma and diploma	Diploma or skilled vocational qualification
		Associate diploma			
Trade certificate	Trade certificate	Skilled vocational qualification[a]	Certificate III or IV	Certificate III or IV	
Other certificate	Other certificate	Basic vocational qualification	Certificate I or II	Certificate I or II	Basic vocational or other certificate
			Certificate, nfd	Certificate, nfd	
No qualifications	No qualifications	Not applicable	Not applicable	Not applicable	None
Not applicable	Not applicable				
Still at school					
Not classifiable	Not classifiable	Inadequately described	Inadequately described	Inadequately described	*Excluded*
Inadequately described	Inadequately described				
Not stated	Not stated	Not stated	Not stated	Not stated	

[a]The ABS (1993) estimates that approximately 95 % of Skilled Vocational Qualifications are Trade Certificate qualifications, the remainder comprising of certificates assessed as being of equivalent level (though not necessarily in a trade)

Appendix 9.2

Table 9.17 Relationship between parity, level of post-school education and selected variables, women 40–44 years, 2011

	Pearson chi-square value	df	N valid cases		Pearson chi-square value	df	N valid cases
By relationship status				By birthplace			
Degree or higher	15,452.118	8	173,230	Degree or higher	3,704.61	8	205,644
Diploma or skilled voc.	10,640.562	8	157,344	Diploma or skilled voc.	1,288.282	8	181,508
Basic or other certificate	1,775.395	8	27,838	Basic or other certificate	90.339	8	32,257
None	12,709.233	8	256,959	None	1,273.209	8	298,071
By family income				By remoteness area			
Degree or higher	2,854.311	12	164,729	Degree or higher	1,988.758	16	205,390
Diploma or skilled voc.	2,447.457	12	143,071	Diploma or skilled voc.	2,026.113	16	181,273
Basic or other certificate	578.078	12	25,369	Basic or other certificate	993.8	16	67,273
None	3,826.484	12	231,330	None	3,587.327	16	297,639

'Number of valid cases' for the categories of educational attainment differs between chi-square tests shown. This is due to variation in the number of 'not stated' responses with regard to the second independent variable; *df* Degrees of freedom

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Chapter 10
Indigenous Family Formation

Nicholas Biddle and Kim Johnstone

10.1 Introduction

According to the 2011 Census, there were 548,370 Aboriginal and Torres Strait Islander (Indigenous) Australians counted, making up 2.7 % of the Australian population who answered the Indigenous status question.[1] After taking into account the undercount of the Indigenous population,[2] preliminary estimates of the population by the Australian Bureau of Statistics (ABS 2012a) give an Indigenous population of 669,736, or 3.0 % of the total Australian population. Census data show one third of Australia's Indigenous population lives in the country's capital cities,[3] the inverse to settlement patterns of non-Indigenous Australians of whom only 33 % live outside the capital cities.

Despite Indigenous Australians making up a small share of the total Australian population, the need to understand the dynamics of this population far exceeds its size. As descendants of the original inhabitants of the Australian continent and associated territories, Indigenous Australians have certain native title rights not held by other population groups. Indigenous Australians are also one of the most

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[1] The census question asks, "Is this person of Aboriginal or Torres Strait Islander origin? For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes".

[2] A Post-Enumeration Survey is carried out 1 month after census night and used to determine how many people were missed or double counted in the Census. The results are used to determine the level of undercount, which in turn informs the calculation of population estimates.

[3] Including each state or territory capital and the Australian Capital Territory.

N. Biddle (✉)
Centre for Aboriginal Economic Policy Research, Australian National University,
Canberra, Australia
e-mail: nicholas.biddle@anu.edu.au

K. Johnstone
Australian Demographic and Social Research Institute, Australian National University,
Canberra, Australia

disadvantaged population groups—if not the most disadvantaged group—within Australia in terms of employment, income, education, housing and health (Steering Committee for the Review of Government Service Provision 2011). This has led to the Council of Australian Governments devoting considerable resources to the policy of 'Closing the Gap', which has as its headline target the elimination of the disparity in life expectancy between Indigenous and non-Indigenous Australians within a generation (FaHCSIA 2009).

A detailed understanding of the size and the composition of the Indigenous population is therefore vital to evidence-based policy formulation in Australia. In order to plan for the future and understand the potential impact of past policies, it is important to know how key demographic characteristics are changing. In addition, the structure and composition of the households in which Indigenous children and adults live will influence the financial and other resources to which they have access.

Following a detailed review of Indigenous data issues and sources, this chapter comprises a two-pronged approach to understanding the families of the contemporary Indigenous population of Australia. We begin by exploring Indigenous marriage patterns in twenty-first century Australia. We then turn to the implications of fertility trends for family structures. We draw on available data to explore the timing and quantum of Indigenous fertility and to identify changes in the recent past. While we highlight how underlying fertility patterns contribute to family form, our analysis of standard demographic data is limited by a number data of issues. In the second part of the analysis, we therefore turn to alternative data sources to explore in detail contemporary family living arrangements among Indigenous peoples and the key characteristics of Indigenous families. Our analysis of fertility and families highlights important regional differences. We close by exploring priorities for future research in this area and implications of family structures and dynamics for demography and social policy.

10.2 *Caveat Lector*—Indigenous Data Issues

10.2.1 *Indigenous Identification*

The Australian government and relevant statistical agencies use a 'working' three-part definition of an Indigenous Australian which requires that an individual:

- is of Aboriginal or Torres Strait Islander descent;
- identifies as an Aboriginal or Torres Strait Islander; and
- is accepted as an Aboriginal or a Torres Strait Islander by the community in which he or she lives.

While the first part of this definition stays reasonably consistent for individuals across time and place, patterns of identification and acceptance are likely to be contingent on social setting and administrative measurement. A unique feature of Indigenous demography, therefore, is the focus on defining who belongs to the group and what membership of that group, as identified in population data sets, means for

demographic analysis (Smith 1980; Gray 1983; Pool 1991; Jackson 1995; Kukutai 2003; Johnstone 2009). This is more than an issue of semantics and 'proper' counting and affects any data source on which demographers may rely to understand historical patterns.

In Australia there has been an ever-increasing count of the Aboriginal and Torres Strait Islander population since the 1976 census, beyond what could be expected from births to Indigenous females and deaths alone (Ross 1999; ABS 2012a). This arises from different undercounts of the Indigenous population at each census, changes in non-response to the question asking for respondents' Indigenous status, and changes in the way the Indigenous status question is both asked on the official form and answered by Indigenous peoples. The birth of Indigenous babies to non-Indigenous women is also a factor contributing to these increasing population counts (Taylor and Biddle 2008).

The 2011 census count of the Indigenous population is the largest ever. In the 5 years from 2006 there has been dramatic growth in the Indigenous Australian population beyond what we would expect from natural increase alone, for the reasons outlined above (Table 10.1). For the Estimated Resident Population,[4] there are also issues about the accuracy of the undercount and how this has been improved by the introduction of Automated Data Linkage to the Census Post-Enumeration Survey in 2011 (ABS 2012b).

Because the census counts and related estimates of the Indigenous population are based on self-identification, it is difficult to mount an argument against using them as the denominator in estimating the most up-to-date fertility rates. For historical fertility research, however, the more difficult question to answer is whether backcast populations[5] should be used as the denominator for estimates of past fertility and whether this will create a consistent time series.

On the one hand, if rapid population growth has been driven by previous census undercounts due to limitations of census coverage, then failure to account for this phenomenon can lead to erroneous over-estimation of historical fertility rates and resultant downward trends through time (Johnstone 2009, 2011a, b). In Australia, the approach has therefore been to use backcast population denominators to calculate historical fertility rates (Wilson and Condon 2006; ABS 2009a; Johnstone 2010, 2011a, b). On the other hand, if rapid population growth was caused by people

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[4]The Estimated Resident Population, the official population count in Australia, is based on the usual resident population as counted in the quinquennial Census, the net undercount derived from the Post-Enumeration Survey, and the inclusion of Australian usual residents who were overseas on census night. As the methods used to create the Estimated Resident Population have changed considerably over the last few censuses (including through the inclusion of a greater Indigenous sample and extension of the Post-Enumeration Survey to remote areas), undercount estimates are not comparable through time.

[5]Backcast populations are estimates created by applying a standard reverse cohort survival of the population from a base point (Condon et al. 2004; Wilson and Condon 2006). This approach is used in Australia in recognition of improvements to Indigenous population counts over time with increased roll out of an Indigenous Enumeration Strategy and the introduction of better estimates of undercount in rural and remote parts of Australia from 2006.

Table 10.1 The Indigenous denominator: changing population counts 2006 and 2011

	2011	2006	Change
Census[a]	548,370	455,023	20.50 %
Estimated Resident Population[b]	669,736	517,043	29.53 %
Women, 15–49 years[b]	171,661	132,783	29.28 %

[a]Usual residents enumerated 2006 and 2011 censuses
[b]Final estimate 2006, preliminary estimate 2011

changing the way in which they identify as being Indigenous in both census and administrative data collections, then backcast population estimates will be based on a different population than historic births estimates. In other words, the mechanisms for identifying Indigenous status in the denominators will be different to the mechanisms for identifying Indigenous status in the numerators.

Ultimately, in the absence of longitudinal datasets with Indigenous status collected twice, or more thorough evaluation of the Indigenous enumeration strategy, it will never be possible to know for sure whether changes in identification or changes in enumeration are driving Indigenous population growth. The issues with the Indigenous population denominator therefore mean it is difficult to carry out through-time analysis with any degree of certainty. This chapter therefore focuses on the most recent available data for analysis of levels of fertility but examines the age profile of childbearing over time.

10.2.2   Data Sources

In Australia, national reporting of Indigenous fertility from the vital registration system is only available from 1998 (ABS 1999), although some state-based data have been available from 1988 (ABS 1994).[6] The counts of Indigenous birth registrations in Australia are affected by Indigenous births not being accurately identified at the time of registration (Johnstone 2011a, b), by non-registrations of Indigenous births (Gerber 2009; Orenstein 2008), and by late registration of Indigenous births (ABS 2006, 2007). Indigenous birth counts for Australia have also been affected by state registration processing issues in New South Wales and Queensland. In 2009, a "retrospective births project" was undertaken in Queensland to clear registrations with incomplete information received by the Queensland registrar of births, deaths and marriages. Consequently, half of the 4,000 registered Indigenous births for the state of Queensland in 2009 were for births that took place in earlier years. This led to a rise in Indigenous birth counts in Queensland and nationally for that year. Between 2005 and 2010 there were approximately 33,000 late registrations not

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[6] In Australia, birth registrations are the responsibility of individual state or territory-based Offices of the Registrar of Births, Deaths and Marriages. National data are compiled by the Australian Bureau of Statistics from records collected and processed by each of these eight states and territories.
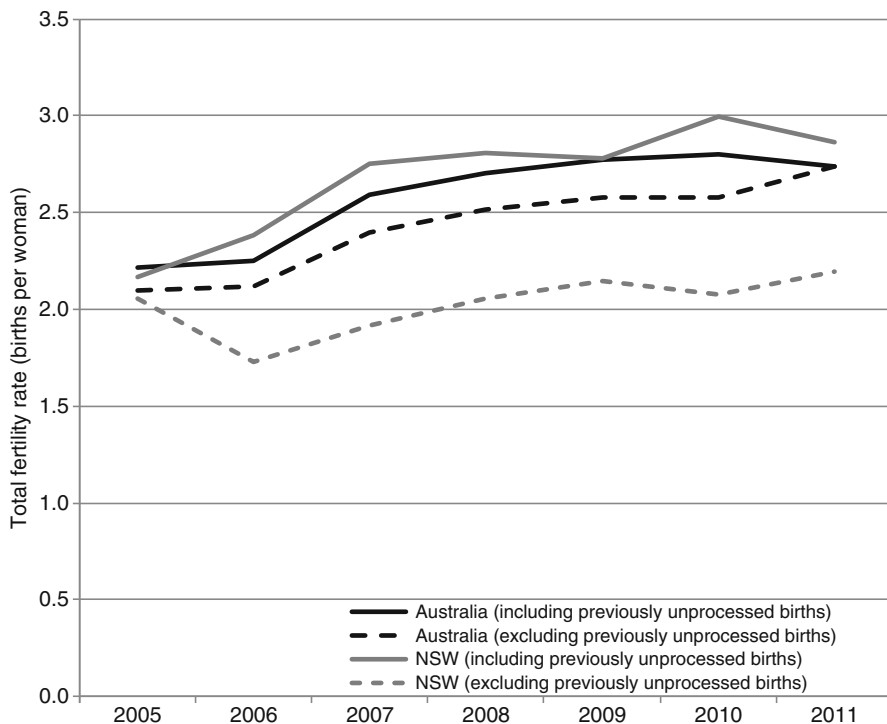
Fig. 10.1   Total fertility rate, Indigenous Australian women, 2001–2011 (ABS 2013b)

recognised in the New South Wales birth counts due to processing error.[7] Figure 10.1 shows that the inclusion of these previously unprocessed births makes a notable difference to the Total Fertility Rate (TFR) in New South Wales, and also for Australia, because the New South Wales Indigenous population makes up a large proportion of the total Indigenous Australian population.

A positive outcome of the Queensland and New South Wales birth registration processes being improved is that for 2011, the data on fertility levels and patterns across Australia are likely to be more complete than ever before. This provides a greater level of confidence in the accuracy of current data.

While the quantum of births has been under-reported in New South Wales for 2005–2010, the unprocessed births have had little impact on the general age profile of Indigenous childbearing women (Fig. 10.2). Analysis by the ABS shows that including previously unprocessed births does not change the median age at childbearing for Indigenous women across Australia as a whole (just under 25 years), and lowers the median age of mothers in NSW only slightly (just over 25 years) (ABS 2012c). Despite data constraints, then, important aspects of family

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[7]These 33,000 births have been incorporated into recast historical population estimates (ABS 2013a) and have been taken into account in birth statistics published by the ABS (2013b).
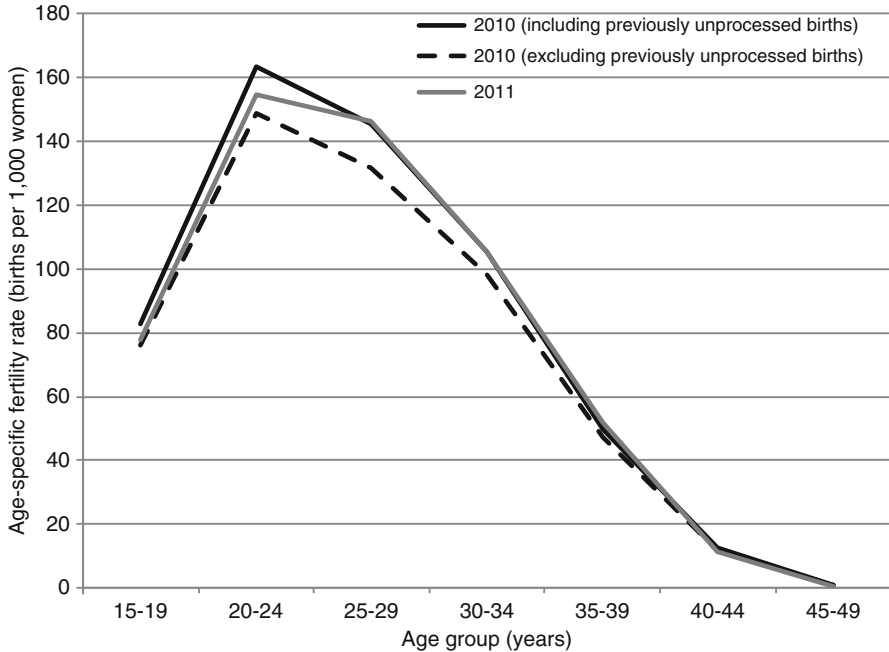
Fig. 10.2 Age-specific fertility rates, Indigenous women, Australia, 2010 and 2011 (ABS 2013b)

formation related to the age at which Indigenous Australians become parents may be investigated.

In addition to vital registration data, a question asking all women aged 15 years and over how many live-born children they have ever had has been included in the 1981, 1986, 1996, 2006 and 2011 censuses. While there are issues of changing undercount and differing non-response to this question, it does eliminate issues of numerator/denominator mismatch. It is possible, therefore, to make comparisons between the age profiles of Indigenous mothers as enumerated in each of the four censuses for which data is available (see Fig. 10.5 for data from 2006 to 2011).

In addition to aggregate data, the ABS releases a 5 % Census Sample File (CSF) for each census. This is a household-based random sample of 5 % of occupied private dwellings and individuals in non-private dwellings. The 2006 CSF has information on 1,002,793 respondents, of whom 22,437 were identified as being Indigenous; 913,262 were identified as being non-Indigenous; 56,935 did not give their Indigenous status; and 10,159 were overseas visitors. This CSF was used for the analysis of the partnering and fertility behaviour of Indigenous Australians (see Sect. 10.5). Unfortunately, the 2011 CSF was not available at the time of writing.

Finally, census data may also be used for disaggregating the population by registered marital status or by social marital status. These data are used in our brief discussion of Indigenous marriage by age (see Sect. 10.3).

The issue of who is counted in an Indigenous population adds a temporal complexity to time series data that reflects administrative practices and changing attitudes (both

towards Indigenous peoples, and among Indigenous peoples themselves). It highlights how understandings of demographic transition and family change among Indigenous populations, dependent as they are on longitudinal measures, may change because of data effects. Although the data on which we rely are not immutable, this does not mean the results are invalid. Demographic analysis in Australia, for example, has shown that where Indigenous population measures can be calculated using different data sources or different definitions of Indigenous status, the results show the same general patterns of demographic change (or stasis) (Smith 1980; Condon et al. 2004; Johnstone 2011a, b). We must accept as working principles that Indigenous data will never be perfectly classified, and that classifications may change. While the measures reported in this paper should be read as indicative rather than exact, it is the patterns and their general implications that are the focus of this chapter.

10.3 Indigenous Marriage Patterns

Marriage is a central feature of traditional Indigenous societies and has importance for family formation and cultural maintenance (Berndt and Berndt 1985). We look at marriage initially as it provides context for the fertility analysis in the next section. While the data suggest that Indigenous males and females are less likely to be legally married, it is important to keep in mind that the notion of marriage is different in some Indigenous societies (Australian Law Reform Commission 1986). Of those who were living in residential partnerships, Indigenous men and women were less likely than their non-Indigenous counterparts to be in registered—as opposed to de facto—marriages. In 2011, 23 % of Indigenous Australians aged 15 years and over reported being in a registered marriage, compared to 49 % of the non-Indigenous population. On the other hand, 16 % of Indigenous Australians reported cohabiting, compared to 9 % of non-Indigenous Australians.

Some of these differences are driven by the younger age profile of the Indigenous population. Indigenous Australians are much more likely to be found in age groups where marriage has not yet occurred and where those partnered are more likely to be cohabiting than married. However, as shown in Figs. 10.3 and 10.4, there are also differences within particular age groups. Figure 10.3 shows the Indigenous and non-Indigenous male and female populations in 5 year age groups who were married or cohabiting, expressed as percentages of the total age group.

There are three notable features in Fig. 10.3. First, Indigenous Australians are slightly more likely to be partnered when young, but substantially less likely to be partnered from the 30–34-year age group and onwards. Second, Indigenous females aged under 25 years are more likely to be partnered than males, but the reverse is true for those aged 30 years and over. The final point to note is the significant drop in proportions partnered among older women, beginning slightly earlier (from 55 to 59 years) for Indigenous women than for non-Indigenous women (from 60 to 64 years), and reflecting the lower life expectancy for males relative to females.

Age is not the only determinant of marital status, with other factors such as geography and socioeconomic status also likely to be important. Biddle and Yap (2010)
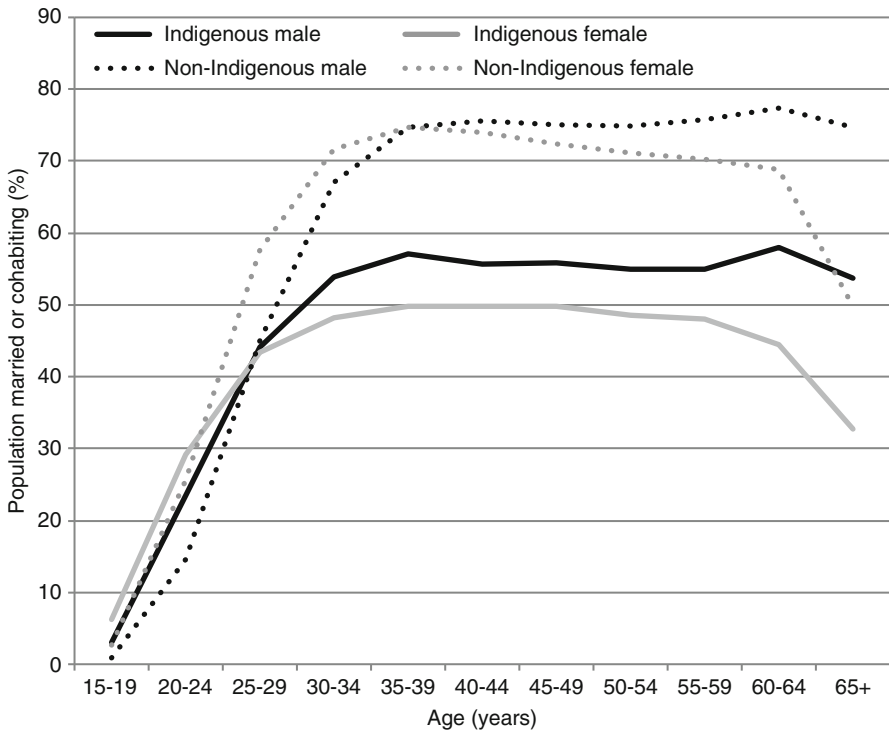
Fig. 10.3 Percentage of Indigenous and non-Indigenous males and females who were married or cohabiting, 2011 (calculations from the 2011 census)
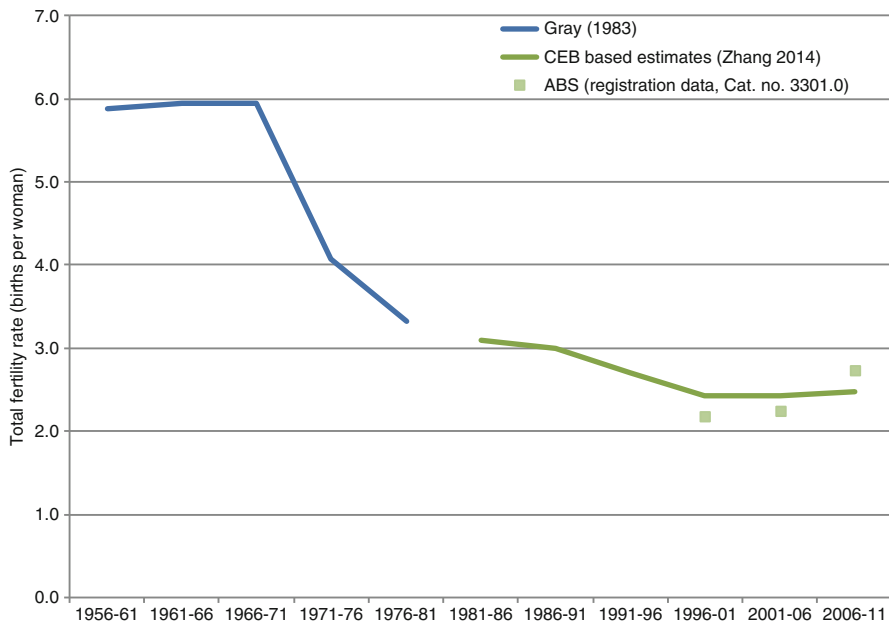
Fig. 10.4 Estimated TFRs, Indigenous women, Australia, 1950s to 2011

found that the probability of being married increased with age (not surprisingly, given Fig. 10.3) and that after controlling for age, females tended to have a higher probability of being partnered than males. After controlling for these differences across the life course by age and sex, Indigenous Australians were found to be less likely to be in a registered or de facto marriage than non-Indigenous Australians. An estimated marginal effect of −0.198 relative to the predicted probability of the base case of 0.454 suggested that these differences are quite large. For the Indigenous population, living in a major city was associated with a lower probability of being partnered, as was having a relatively low level of education.

10.4   Indigenous Fertility Patterns

Despite data constraints, several efforts have been made to estimate Indigenous fertility at a national level (Gray 1983; Kinfu and Taylor 2002; Smith 1980; Tesfaghiorghis 1996). These estimates (documented in Fig. 10.4) show a probable decline in Indigenous fertility in the last few decades, from around three to four births per woman in the 1970s and 1980s to between two and three births per Indigenous woman in the first decade or so of the twenty-first century.

The issues relating to birth registration data are not insignificant. They raise serious doubt about whether the increase in TFRs observed in the second half of the last decade is 'real' or an artifact of the data. In 2011, when we can be more confident of data reliability, the Indigenous TFR was 2.7 births per woman, higher than the TFR of 1.9 for non-Indigenous women. Despite this difference, the Indigenous rate is not exceptionally high and is commensurate with Maori fertility in Aotearoa/New Zealand and Inuit fertility in Canada (Johnstone 2011b).

10.4.1   Age Profile of Childbearing Women

In addition to the quantum of births, the key differences between Indigenous and non-Indigenous fertility in Australia are in the age profiles. Among Indigenous mothers, peak childbearing is at 20–24 years. Of note is the high rate of teenage fertility (78 births per 1,000 Indigenous girls aged 15–19 years). This pattern of young childbearing stands out in Australia, where the majority population has an older fertility profile, and is also seen among Indigenous minority populations in other developed countries (Johnstone 2011b).

These different age profiles of Indigenous and non-Indigenous mothers are reinforced by results from the last two censuses in Australia (Fig. 10.5), which give the average number of children ever born by age for Indigenous and non-Indigenous females in 2006 and 2011.

Results presented in Fig. 10.5 show that there was a very small decrease in the number of children ever born to Indigenous females aged 15–34 in 2011 (compared
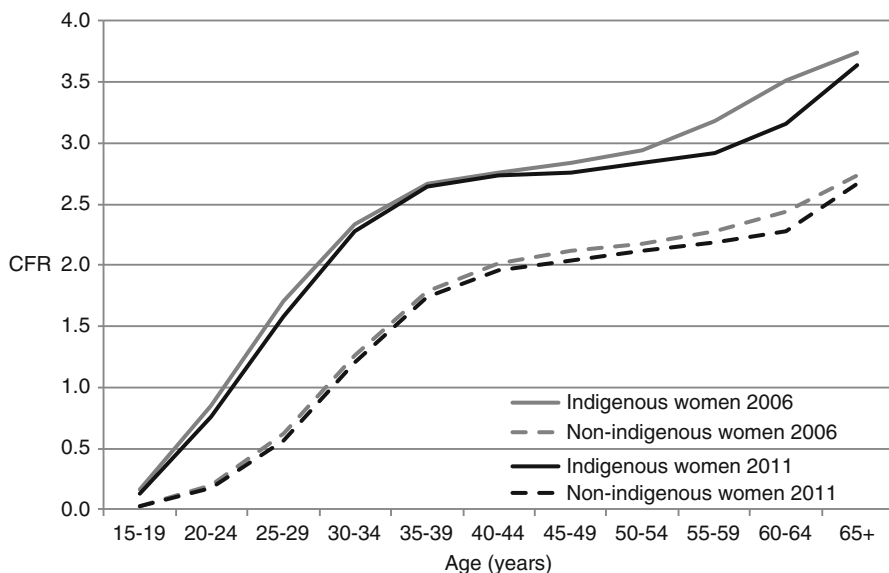
Fig. 10.5 Average number of children per woman by age group and Indigenous status, 2006 and 2011 (calculations based on 2006 and 2011 census data)

to women of the same age in 2006). However, the largest decrease is amongst those 55–64 years and over, well beyond the standard childbearing age. This implies that there was a small decrease in the average number of children ever born for Indigenous females between 2006 and 2011, mainly driven by fertility decisions 20 or more years ago. The current cohorts of Indigenous females aged 55–59 years and 60–64 years had fewer children across their childbearing years than those born 5 years earlier.

Increasing birth counts because of data capture mean changes to age-specific birth rates could reflect both real changes in fertility or simply better capture of Indigenous status of babies and their parents over time. Between 1998 and 2011 there have been increases in all age-specific fertility rates for babies born to Indigenous women (Fig. 10.6). Early childbearing thus remains an important characteristic of Indigenous mothers.

The early force of childbearing (ETFR) is a measure used in some contexts to study early childbearing (Jackson et al. 1994). It is the proportion of the TFR that is attributable to women aged 25 years or less in the year of interest. It is a useful measure in this context because it allows us to focus on the age of mothers without being distracted by data counting issues. For the 14 years that we have data disaggregated by Indigenous status, there has been a decline in the proportion of women having children before 25 years of age (Fig. 10.7). This proportion has been below 50 % for 11 consecutive years and reached 42 % in 2011, compared to 12 % for the entire female population.

If we look at early childbearing by state and territory across Australia, there is considerable variation (Table 10.2). Notably, even where young mothering is less prevalent, at least one-third of Indigenous mothers are having their babies under the age of 25 years.
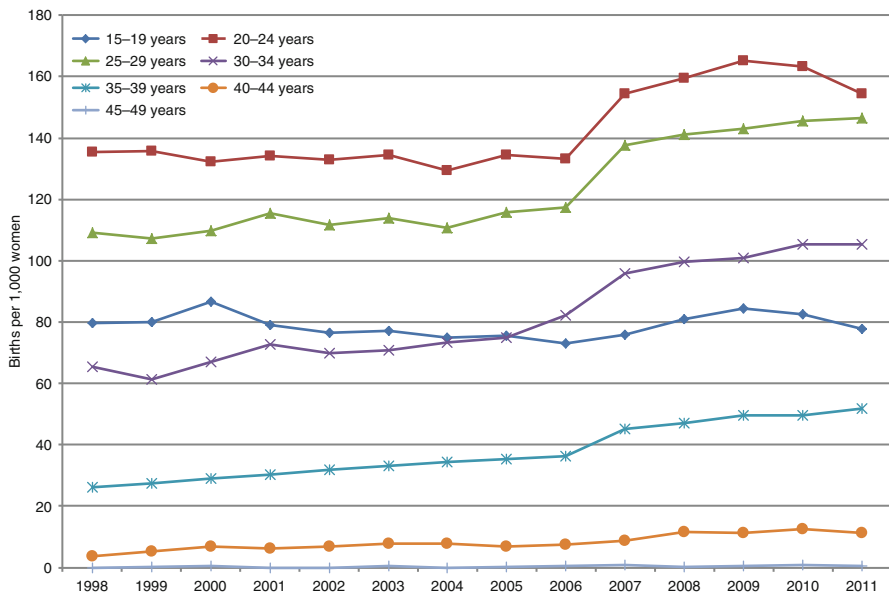
Fig. 10.6 Age-specific fertility rates, Indigenous women, Australia, 1998–2011 (ABS, catalogue no. 3301.0, various years)
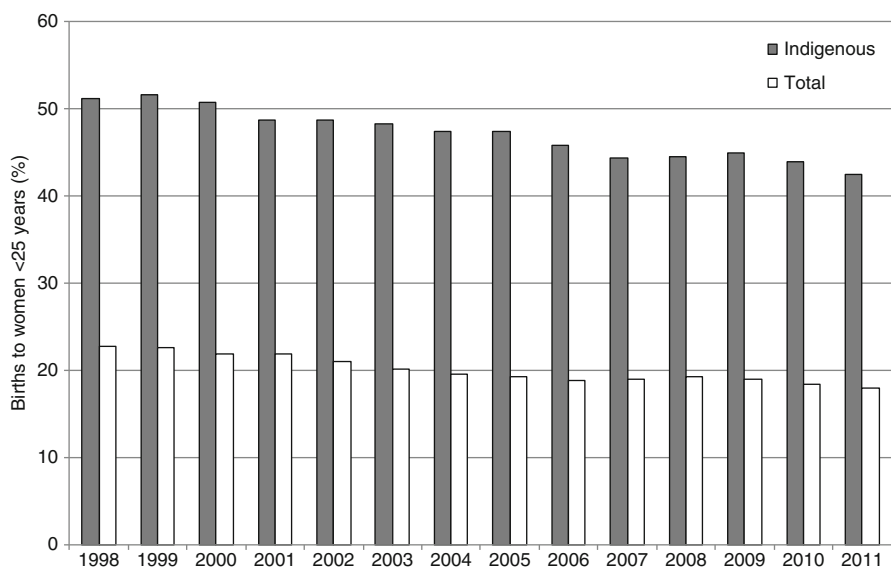
Fig. 10.7 Early force of childbearing, Indigenous and all mothers, Australia, 1998–2011 (calculated from ABS, catalogue no. 3301.0, various years)

Table 10.2 Early childbearing among Indigenous women, states and territories, 2011

State/Territory	Proportion (%) of TFR attributable to women aged less than 25 years
New South Wales	39.8
Victoria	34.3
Queensland	42.3
South Australia	42.9
Western Australia	47.5
Tasmania	39.2
Northern Territory	48.4
Australia[a]	**42.4**

[a]Includes births to Indigenous women in the Australian Capital Territory (ACT). Numbers were too small to calculate separate Indigenous rates for the ACT
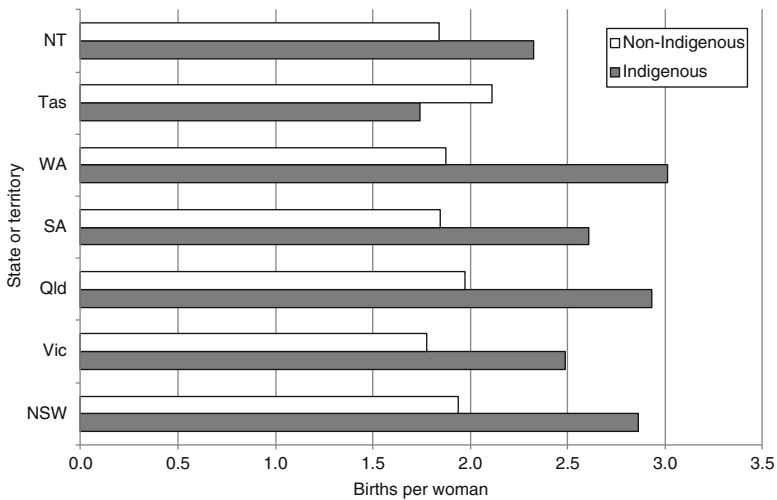
Fig. 10.8 Total fertility rates, Indigenous and non-Indigenous women, states and territories, 2011 (calculated from data published in ABS 2012a, c) (Numbers are too small for release of Indigenous births for the Australian Capital Territory)

10.4.2 Regional Variation in Indigenous Fertility

Fertility rates are not uniform across Australia. State/territory comparisons show that the states with the largest Indigenous populations have the highest Indigenous fertility (Fig. 10.8). In Tasmania, Indigenous fertility is lower than non-Indigenous fertility, which is likely an indicator of the smaller population and very high levels of exogamous partnerships (documented later in this chapter).
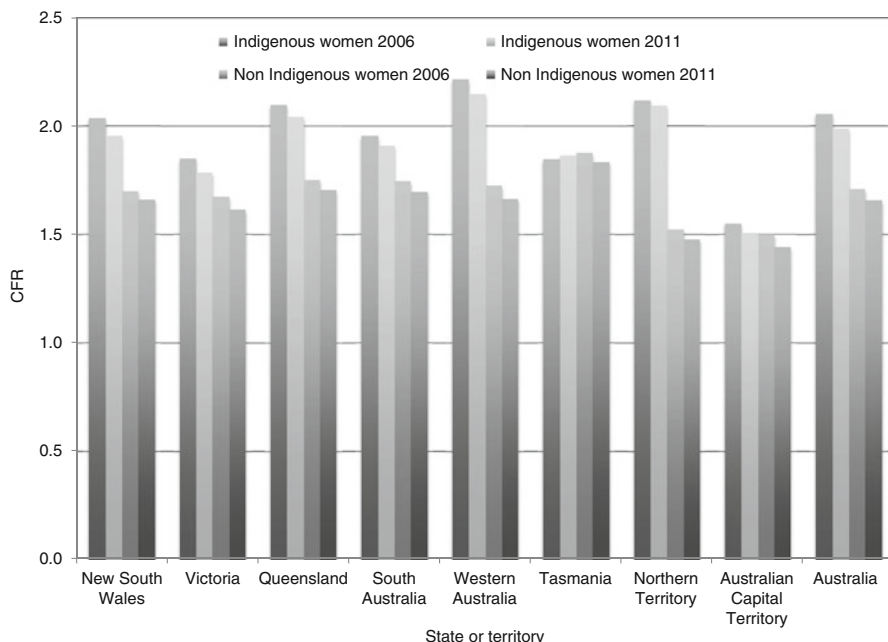
Fig. 10.9 Average number of children per woman aged 15 years and over by state or territory and Indigenous status, 2006 and 2011 (calculations based on the 2006 and 2011 censuses)

Figure 10.9 uses census data to make three important points. First, there were only two jurisdictions (ACT and Tasmania) for which the average number of children ever born was similar for Indigenous and non-Indigenous females (aged 15 years and over). The second point to note is that there is substantial variation across jurisdictions, with the average number of children close to, or above, two in New South Wales, Queensland, Western Australia and the Northern Territory, but somewhat lower in Victoria, South Australia, Tasmania and the ACT. Finally, in all jurisdictions apart from Tasmania, there was a decline in the average number of children ever born between 2006 and 2011.

Setting aside jurisdictional boundaries, a comparison of the average number of children ever born shows important differences between the capital cities of Australia[8] and the rest of the country. Figure 10.10 shows that urban/regional fertility differences feature for all Australian women and have been consistent across cohorts. For Indigenous women, however, the urban/regional differences are greater at all ages. Notable also is the higher number of children reported by Indigenous women regardless of where they lived compared to all non-Indigenous women regardless of where they lived.

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[8] Including each state or territory capital and the Australian Capital Territory.
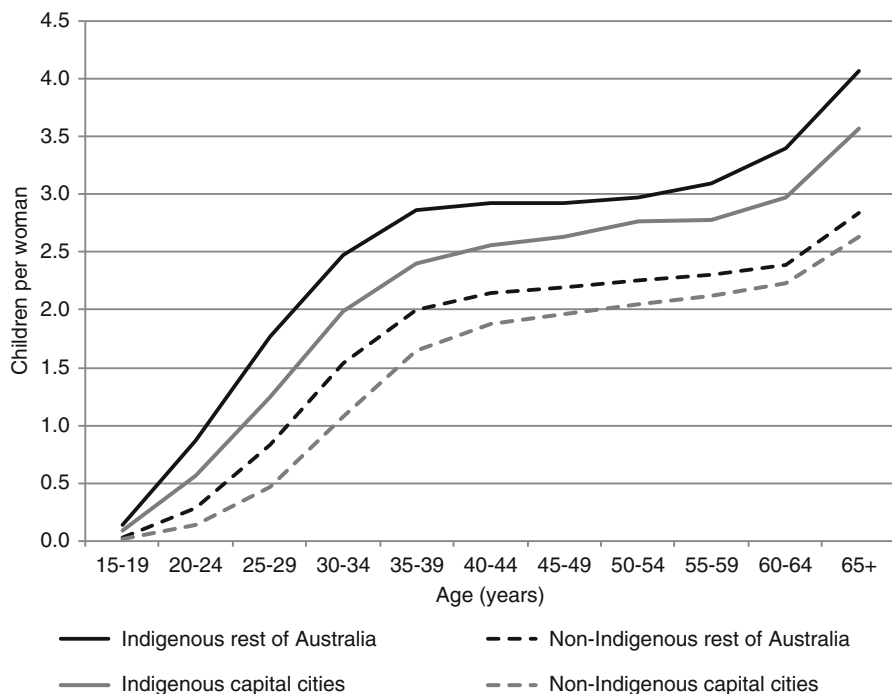
Fig. 10.10 Average number of children per woman by age group, Indigenous status and place of usual residence, 2011 (calculations based on the 2011 census)

10.4.3 Indigenous Babies

Births to Indigenous mothers only tell part of the story as many children are born to an Indigenous father and a non-Indigenous mother. It is therefore important to look at Indigenous births to both Indigenous and non-Indigenous mothers in order to understand current and future Indigenous birth cohorts, and the family dynamics of Indigenous Australians.

In 2011, 27 % of Indigenous babies in Australia were born to non-Indigenous mothers. Indigenous babies were most likely to have a non-Indigenous mother in New South Wales, Victoria and Tasmania. In contrast, it was very uncommon for Indigenous babies to be born to non-Indigenous mothers in the Northern Territory. Also of note was the high proportion of births to Indigenous mothers but not an Indigenous father. Except in the Northern Territory and Western Australia, this was the most common category. These data do need to be interpreted with some care because the category of 'Mother only' Indigenous includes registrations where the paternity of the father was unknown (Table 10.3).

Table 10.3 Indigenous births in Australia by Indigenous status of parents (%), 2011 (n = 17,621) (ABS 2013b)

State/Territory	Both parents Aboriginal and/or Torres Strait Islander	Mother only	Father only	
New South Wales	22.7	44.1	33.2	100.0
Victoria	19.3	46.6	34.1	100.0
Queensland	32.1	42.2	25.7	100.0
South Australia	34.2	39.6	26.2	100.0
Western Australia	43.5	35.2	21.3	100.0
Tasmania	11.9	47.7	40.3	100.0
Northern Territory	50.3	41.9	7.8	100.0
Australia	**30.9**	**42.1**	**26.9**	**100.0**

10.5   Regression Analysis of the Partnering and Fertility Decisions of Indigenous Australians

From the fertility data presented in Sect. 10.4 we can infer that, on average, families of Indigenous Australians have young parents, and more siblings than families of non-Indigenous Australians. We now turn to other census data to look at Indigenous families in more detail. We extend the analysis in Biddle and Yap (2010) by using a similar methodology (regression analysis) applied to the CSF, but focusing on the characteristics of an Indigenous person's partner (conditional on being married) and the number of children born.

The first equation analysed (Sect. 10.5.1) is the probability that an Indigenous person who is married has a non-Indigenous partner. This component of the analysis may be considered complementary to the analysis (using a different method) of partnering between Indigenous and non-Indigenous Australians that is included in Chap. 4.

The explanatory variables in the equation include a person's state or territory of usual residence, whether or not they live in a major city, their education level (both high school and post-school qualifications), whether or not they changed usual residence in the last 5 years or in the last year (their migration status) and whether or not they are employed. Although these variables are not of particular interest themselves, they are included as proxies (albeit imperfect) for an ongoing attachment to a traditional Indigenous lifestyle.

There are two additional variables used to proxy the exposure an Indigenous person might have to Indigenous as opposed to non-Indigenous Australians. The first of these is the percentage of the population identifying as Indigenous in the area in which a person lives. This is based on the 64 regions included in the CSF. This geographic classification includes some large areas (including all of the Northern Territory). There is also substantial variation in population size across the areas; the

smallest being Central Metropolitan (Perth) with 0.62 % of the total sample (5,767 observations) and the largest being Outer Western Melbourne with 3.07 % of the sample or 28,770 observations. The exposure that a particular Indigenous person in these areas will have to others in their area is therefore likely to vary quite substantially. Unfortunately, this is the only geographic variable available on the CSF.

To measure exposure to other Indigenous Australians in the workplace, we use the Indigenous proportion of the population who work in the individual's industry. One would expect individuals to be more likely to interact with those within their own industry as opposed to their occupation. For example, managers in the accommodation industry are more likely to interact with other occupations in that industry than they would with managers in the finance industry (conditional on education). Industry is defined using the modified two-digit industry classification, also outlined in ABS (2009b), and once again categories vary quite considerably in size. There are a number of industries which make up less than 0.05 % of the employed sample including 'Agriculture, Forestry and Fishing not further defined (n.f.d.)', 'Accommodation and Food Services n.f.d.', 'Information Media and Telecommunications n.f.d.', 'Professional, Scientific and Technical Services n.f.d.', and 'Other Services n.f.d.' At the other end of the distribution, 6.0 % of the employed sample was working in 'Other Retailing'.

Having identified the characteristics that are associated with whether or not a married Indigenous Australian has a non-Indigenous partner, we next consider the characteristics of these non-Indigenous partners (Sect. 10.5.2). These are compared with the characteristics of Indigenous partners of Indigenous Australians, Indigenous partners of non-Indigenous Australians and non-Indigenous partners of non-Indigenous Australians. Characteristics that are considered include employment (paid, unpaid and voluntary), education and income.

One particularly important characteristic for the purposes of this chapter is the number of children that a person has had. This not only influences the rate and composition of population growth, but also other socioeconomic characteristics at the individual level. The census contains information on the number of children ever born to each female 15 years and over. While information on the number of children that males in the sample had fathered would also be useful, having children when young can seriously affect the education and skills development of females in particular. Females who have children when they are young are less likely to complete high school and post-school qualifications (de Vaus 2002). They also have lower levels of employment participation throughout their lives and lower incomes (Caldas 1993). Focusing on females, therefore, the third set of results (Sect. 10.5.3) looks at the factors associated with the number of children ever born.

The interaction between one's own Indigenous status and the Indigenous status of one's partner is incorporated using three dummy variables indicating that either the female is non-Indigenous whereas her partner is Indigenous, she is Indigenous with an Indigenous partner or that she is Indigenous with a non-Indigenous partner. The base case is therefore a non-Indigenous female with a non-Indigenous partner.

In the final set of results (Sect. 10.5.4), we consider the household characteristics of Indigenous children conditional on the Indigenous status of adults in their family. Three types of families are considered—couple families with Indigenous adults only, couple families with an Indigenous and non-Indigenous adult and single parent families. Characteristics that are considered are whether:

- household equivalised income is in the lowest quartile;
- the home is owned or being purchased by a usual resident;
- the household does not have an employed adult; and
- the household does not have an adult that has completed Year 12.

10.5.1   The Partners of Indigenous Australians

Focusing on those who are in either a marital or de facto relationship, the analysis in Table 10.4 summarises the factors associated with being in an exogamous relationship for Indigenous Australians. It is carried out using a regression-style approach, with the probability of an Indigenous person having a non-Indigenous partner as the dependent variable and the probit model used to fit the data. Four separate models are estimated. In the first model, the only explanatory variables are a person's sex, age (in 5-year age groups up to 55 years or more), State/Territory of usual residence and whether or not they live in a major city. The second model includes a wider range of individual and area-level explanatory variables (including the proportion of people living in a person's own area who identify as being Indigenous). The final two models include this expanded set of explanatory variables but are estimated separately for males and females. As a similar style of analysis is used in Biddle and Yap (2010), further details of the data used in the current analysis are available there.

Results are presented as marginal effects, or the difference in the probability of being in an exogamous relationship from changing that particular variable after holding all else constant. This difference is expressed relative to the 'base case' person, a hypothetical individual with a defined set of characteristics given underneath the table with p-values also available in the notes for the table.

The results in the first column of Table 10.4 tend to support previous research. Females were found to be significantly more likely to have a non-Indigenous partner than males, though the size of the marginal effect was not large. There were some differences also by age. Partnered Indigenous Australians aged 15–19 years were significantly less likely to have a non-Indigenous partner than someone aged 30–34 years (the base case), as were those aged 55 years and over. The first of these results is likely to reflect a higher rate of marriage for Indigenous youth in general (compared to non-Indigenous youth, as documented in Biddle and Yap 2010), whereas the latter marginal effect becomes positive once other characteristics are controlled for (in Model 2).

After controlling for age, sex and state or territory, those Indigenous Australians who live outside major cities were significantly less likely to have a non-Indigenous

Table 10.4 Factors associated with having a non-Indigenous partner, partnered Indigenous Australians, 2006 (calculations using the 2006 5 % CSF)

Explanatory variables	Males and females		Males	Females
	Model 1	Model 2	Model 2	Model 2
Female	0.027***	0.046***		
Aged 15–19	−0.153**	−0.184**	−0.261**	−0.138
Aged 20–24	−0.022	−0.081**	−0.069*	−0.069
Aged 25–29	−0.011	−0.056**	−0.076**	−0.023
Aged 35–39	−0.011	−0.016	−0.035	0.005
Aged 40–44	0.022	0.042*	0.011	0.070**
Aged 45–49	0.038*	0.078***	0.060**	0.077**
Aged 50–54	0.010	0.065**	0.015	0.100***
Aged 55+	−0.045**	0.064***	0.020	0.099***
Victoria	0.087***	0.009	−0.034	0.058
Queensland	−0.069***	−0.056***	−0.079***	−0.019
South Australia	−0.042	−0.116***	−0.086**	−0.128**
Western Australia	−0.233***	−0.199***	−0.192***	−0.174***
Tasmania	0.100***	0.058*	0.038	0.079*
Northern Territory	−0.451***	0.098**	0.036	0.124**
Australian Capital Territory	0.044	0.021	0.032	−0.005
Lives outside a major city	−0.277***	−0.083***	−0.063***	−0.095***
Completed Year 9 or less		−0.144***	−0.087***	−0.170***
Completed Year 10 or 11		−0.033*	−0.016	−0.043
Does not have any qualifications		−0.039	−0.098**	0.011
Has a Diploma or Certificate only		−0.003	−0.015	−0.012
Changed usual residence in the last 5 years		0.010	0.000	0.023
Changed usual residence in the last year		0.097***	0.070***	0.101***
Not employed		−0.186***	−0.151***	−0.197***
Per cent of population in area who are Indigenous		−0.104***	−0.089***	−0.097***
Per cent of population who work in same industry who are Indigenous (for those who are employed)		−0.059***	−0.041***	−0.062***
Probability of base case	0.812	0.797	0.875	0.779
Number of observations	4,493	3,678	1,758	1,920
Pseudo R-Squared	0.1635	0.2485	0.2912	0.2234

Note: The base case individual is: male; aged 30–34 years; lives in a major city in New South Wales; has completed Year 12 and has a degree; did not change usual residence in the last 5 years; and is employed. The base case person is also assumed to live in an area where 2.5 % of the population is Indigenous and to work in an industry where 1 % of workers are Indigenous

Variables that are significant at the 1 % level of significance are labelled ***, those significant at the 5 % level of significance only are labelled **, whereas those significant at the 10 % level of significance only are labelled *

partner than those living in a major city. While this finding reinforces the results found in Heard et al. (2009) and in Chap. 4 of this volume, it is interesting to note that the association becomes substantially smaller once other characteristics of the individual are controlled for. Additional modelling shows that this is mainly due to controlling for the Indigenous population share of the area in which the individual lives. Specifically, and in keeping with the explanation suggested in Sect. 10.4, those who live in an area with a relatively high Indigenous population share are significantly less likely to have a non-Indigenous partner than those who live in areas with a lower share. In addition, those who have relatively low levels of education and those who were not employed are less likely to have a non-Indigenous partner, reflecting once again differences in the exposure of Indigenous individuals to non-Indigenous individuals.

10.5.2   Characteristics of Partners of Indigenous and Non-Indigenous Australians

In Table 10.5 we summarise the characteristics of the partners of Indigenous and non-Indigenous Australians by their sex and their own Indigenous status. The table is broken into two sections—the first for male partners and the second for female partners. In each of these tables, the first column is for non-Indigenous partners of non-Indigenous Australians, whereas the second column is for non-Indigenous partners of Indigenous Australians. The third column is for Indigenous partners of Indigenous Australians, whereas the final column is for Indigenous partners of non-Indigenous Australians. The asterisks between the columns are used to identify the significance of the differences between the two columns on either side.

Looking at the first row of results, there was no significant difference in employment rates between male non-Indigenous partners of non-Indigenous and Indigenous Australians. Around three-quarters of both populations were employed. However, this proportion fell to 0.601 for male Indigenous partners of Indigenous Australians, significantly lower than the two columns that it is compared against. Non-Indigenous partners of non-Indigenous Australians were, however, significantly and substantially more likely to be employed as managers or professionals compared to partners of Indigenous Australians. In general, compared to partners of Indigenous Australians, male non-Indigenous partners of non-Indigenous Australians tended to have higher levels of education, were less likely to have a 'core activity' need for assistance (in their day to day lives because of a disability, long-term health condition, or old age), were less likely to have low personal income and were more likely to have undertaken voluntary work. They were, however, less likely to currently be students.

While male non-Indigenous partners of Indigenous Australians tended to have poorer socioeconomic outcomes than male partners of non-Indigenous Australians, they tended to have better outcomes than male Indigenous partners of Indigenous Australians. The difference is most stark for the measure of low income (defined as the income groups that are less than half the Australian median income

Table 10.5 Proportion of population with particular socioeconomic characteristics by sex and Indigenous status of respondent and partner, 2006 (calculations using the 2006 5 % CSF)

	Male						
	Non-Indigenous partner of:				Indigenous partner of:		
	Non-Indig.		Indig.		Indig.		Non-Indig.
Employed	0.745		0.751	***	0.601	***	0.748
Employed as a manager or professional	0.455	***	0.324	***	0.120	***	0.292
Undertook 5 h or more of unpaid work in last week	0.501		0.490	***	0.375	***	0.513
Has completed Year 12	0.465	***	0.300	***	0.175	***	0.286
Has a degree or higher	0.204	***	0.071	***	0.020	***	0.081
Is currently a student	0.038	***	0.044		0.046	***	0.060
Has a 'core activity' need for assistance	0.036	***	0.055	***	0.046	**	0.051
Has an income less than $250 per week	0.164	***	0.197	***	0.490	***	0.199
Undertook voluntary work for an organisation or group	0.194	***	0.141		0.148	***	0.173
	Female						
	Non-Indigenous partner of:				Indigenous partner of:		
	Non-Indig.		Indig.		Indig.		Non-Indig.
Employed	0.598	***	0.645	***	0.423	***	0.580
Employed as a manager or professional	0.291	***	0.242	***	0.092	***	0.189
Undertook 5 h or more of unpaid work in last week	0.822		0.824	***	0.597	***	0.776
Has completed Year 12	0.492	***	0.410	***	0.192	***	0.278
Has a degree or higher	0.221	***	0.119	***	0.034	***	0.087
Is currently a student	0.057	***	0.080	***	0.062	***	0.088
Has a 'core activity' need for assistance	0.027	***	0.031	***	0.040		0.039
Has an income less than $250 per week	0.358	***	0.312	***	0.467	***	0.371
Undertook voluntary work for an organisation or group	0.241	***	0.211	***	0.161	***	0.189

Note: Variables that are significant at the 1 % level of significance are labelled ***, those significant at the 5 % level of significance only are labelled **, whereas those significant at the 10 % level of significance only are labelled *

of $250 per week in 2006). Around one in five male non-Indigenous partners of Indigenous Australians had this measure of low income. This rises to almost one in two Indigenous partners of Indigenous Australians. Assuming income is shared within the family, this assortative mating (Mare 1991) has clear implications for the

economic resources available to Indigenous females. In essence, those Indigenous females with a non-Indigenous partner are likely to have access to a much greater level of income than those Indigenous females with an Indigenous partner.

The patterns for female partners are reasonably similar to those of male partners. Non-Indigenous female partners of non-Indigenous Australians tend to have the most favourable socioeconomic outcomes. Female Indigenous partners of Indigenous Australians, on the other hand, tend to have the least favourable outcomes. There was, however, one major exception to this general pattern, with female non-Indigenous partners of Indigenous Australians more likely to be employed on average than non-Indigenous partners of non-Indigenous Australians. This may reflect the slightly lower income for the male Indigenous partner of non-Indigenous Australians identified in the first part of the table, meaning there is greater pressure on the non-Indigenous female in these partnerships to be working.

10.5.3   Number of Children Ever Born

In the previous section of results, we presented variation in the socioeconomic outcomes of Indigenous and non-Indigenous Australians depending on their sex, as well as their own and their partner's Indigenous status. In this section, we return to the issue of fertility and consider the factors associated with the number of children ever born to a female, conditional on her Indigenous status and that of her partner. Data on the CSF is right-censored at four or more children ever born. Around 31.8 % of Indigenous females and 11.7 % of non-Indigenous females were in this last category. However, according to data from the full census sample in 2006, 10.3 % of Indigenous females had four children, 5.7 % had five children and 7.3 % had six or more. While there is no simple solution to this right-censoring without any additional information, it is likely to have the effect of artificially reducing the estimated differences between Indigenous females (who have larger families on average) and non-Indigenous females. This potential bias should be kept in mind when interpreting the results.

Parameters are estimated through maximum likelihood estimation of the Poisson model after testing for and rejecting over-dispersion. Results are presented as marginal effects (or the difference in the predicted number of children ever born relative to the base case), with the statistical significance of the relevant coefficients identified with asterisks as in Table 10.6.

The first model shows that all three combinations of partner and own Indigenous status result in a higher average number of children ever born relative to the base case (non-Indigenous females with a non-Indigenous partner) after controlling for age, State or Territory and whether or not a person lives in a major city. Of the three groups, Indigenous females with an Indigenous partner were predicted to have had the greatest number of children ever born.

What is perhaps of greatest interest is the finding that non-Indigenous females with an Indigenous partner had slightly fewer children than an Indigenous female with

Table 10.6 Factors associated with the number of children ever born, partnered Indigenous and non-Indigenous females, 2006 (calculations using the 2006 5 % CSF)

Explanatory variables	Model 1	Model 2
Non-Indigenous female with Indigenous partner	0.223***	0.163***
Indigenous female with Indigenous partner	0.623***	0.398***
Indigenous female with non-Indigenous partner	0.302***	0.197***
Aged 15–19	−1.050***	−0.966***
Aged 20–24	−0.895***	−0.827***
Aged 25–29	−0.573***	−0.516***
Aged 35–39	0.527***	0.429***
Aged 40–44	0.756***	0.602***
Aged 45–49	0.818***	0.641***
Aged 50–54	0.880***	0.666***
Aged 55+	1.080***	0.627***
Victoria	−0.023***	−0.021***
Queensland	0.007	0.017***
South Australia	−0.011	−0.018**
Western Australia	0.022***	0.030***
Tasmania	−0.070***	−0.073***
Northern Territory	−0.119***	−0.073***
Australian Capital Territory	−0.029*	0.025
Lives outside a major city	0.159***	0.129***
Completed Year 9 or less		0.149***
Completed Year 10 or 11		0.118***
Does not have any post-school qualifications		0.139***
Has a diploma or certificate only		0.107***
Changed usual residence in the last 5 years		−0.065***
Changed usual residence in the last year		−0.091***
Not employed		0.231***
Number of children for the base case	1.296	1.183
Number of observations	198,054	172,047
Pseudo R-Squared	0.0611	0.0732

Note: The base case individual is: non-Indigenous with a non-Indigenous partner; aged 30–34 years; lives in a major city in New South Wales; has completed Year 12 and has a degree; did not change usual residence in the last 5 years; and is employed

Variables that are significant at the 1 % level of significance are labelled ***, those significant at the 5 % level of significance only are labelled **, whereas those significant at the 10 % level of significance only are labelled *

a non-Indigenous partner. While this difference was small, it was still statistically significant (in Model 1 at least). So, while the Indigenous status of both the male and female partners has a significant association with fertility, it would appear that the Indigenous status of the female is slightly more important.

Comparing results from Models 1 and 2 show similar patterns for Indigenous status. However, the marginal effects are much smaller in the second model compared

to the first. This implies that many, but not all, of the differences found in Model 1 are due to observable socioeconomic characteristics. It is possible, though not certain, that the differences may reduce even further if other characteristics not available in the census could be controlled for. In particular, if the next version of the ABS' National Aboriginal and Torres Strait Islander Social Survey were to include information on the number of children ever born, then it would be possible to test associations with variables including recognition of homelands, experience of arrest, continuous income, and measures of wealth.

10.5.4   Household Characteristics by Indigenous Status of Family

As mentioned earlier, the most obvious effect of relatively high rates of exogamy is a higher number of births of children who are registered as being Indigenous than the fertility rates of Indigenous women would suggest. The extent to which the children of mixed Indigenous and non-Indigenous parentage continue to identify as being Indigenous will determine whether Australia (and urban areas in particular) continues to experience high rates of Indigenous population growth. However, this high rate of intermarriage can also have implications for the calculation of dependency ratios (O'Reilly 1994: 154). In particular, the dependency of Indigenous children cannot simply be related to aggregates such as the number of working-age Indigenous parents, as significant numbers of non-Indigenous parents also contribute to the support of Indigenous children.

High rates of exogamy also affect the ability of government and other providers to target services to Indigenous children. In order to improve outcomes for Indigenous children, it is not sufficient to target Indigenous mothers. Doing so in isolation may result in the children of Indigenous fathers and non-Indigenous mothers missing out on the services required to meet the government's 'Closing the Gap' targets.

This issue is mitigated to a certain extent by the fact that children in families with both Indigenous and non-Indigenous adults tend to have better outcomes across a number of dimensions than those in families with Indigenous adults only. This is demonstrated in Table 10.7, which gives the proportion of Indigenous children aged 14 years and under in four types of households by three family types. The first family type is single Indigenous parent families. The second is couple families with Indigenous adults only, and the third is couple families with Indigenous and non-Indigenous adults.[9] The statistical significance of the difference between columns 1 and 2 as well as columns 2 and 3 is also given (based on the aforementioned notation).

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[9]Children living in 'other' family types as well as those in families with non-Indigenous adults only are excluded from the analysis.

Table 10.7 Household characteristics of Indigenous children aged 14 years and under by family type, 2006 (calculations using the 2006 5 % CSF)

	Single Indigenous parent family		Couple family with Indigenous adults only		Couple family with Indigenous and non-Indigenous adults
Household with equivalised income in lowest quartile	80.9	***	73.6	***	38.8
Home owned or being purchased	14.8	*	15.6	***	53.6
Household with no employed adults	60.9	***	34.4	***	20.3
Household with no adult that has completed Year 12	74.1	***	68.4	***	51.5

Variables that are significant at the 1 % level of significance are labelled ***, while those significant at the 10 % level of significance only are labelled *

In general, Indigenous children living in single parent families tended to be living in households with the worst socioeconomic outcomes. However, compared to those in couple families with Indigenous adults only, those Indigenous children who live in a couple family with Indigenous and non-Indigenous adults are less likely to be in a household with an equivalised income in the lowest quartile, more likely to live in a home that is owned or being purchased, and less likely to live in a household that did not have an employed adult.

It is important to be careful when interpreting these results. They do not in any way suggest that Indigenous-only families should be discouraged. Indeed, for Indigenous-specific measures of wellbeing such as language and cultural maintenance, Indigenous-only households and families are likely to do better, on average. Rather, the results simply show that for certain outcomes, relatively advantaged non-Indigenous partners tend to mitigate household-level socioeconomic disadvantage.

10.6   Implications and Concluding Comments

The intersection of issues around data quality and Indigenous identification means we will never have immutable measures relating to the fertility and families of Indigenous Australians. The social context within which analysis of Indigenous demographic data takes place means care is needed when interpreting results, with consideration of the purposes for which data may be used:

1. Basic demography—we look to fertility and family data to understand population dynamics. Understanding family formation and fertility patterns gives us important clues for how to project future populations and understand future population dynamics, including ageing and dependency.
2. Linked to this, the development of theoretical foundations for Indigenous demographic transitions and family formation.

3. The study of family dynamics—including intergenerational dependency and support, family size, family resilience and family vulnerability to social and economic stressors.
4. Informing policy decisions affecting Indigenous people, and more broadly for parents and their children, as well as policy provisions specifically targeting Indigenous people.

To understand current and future Indigenous population dynamics requires an almost forensic use of a range of data sources informing fertility and family formation patterns, and how these may be changing over time. Our standard practice as demographers is to use Indigenous status as an independent variable and apply demographic methods. This has been particularly important in addressing the 'frank failure' of Australia's statistical system to illuminate Indigenous population dynamics (Smith et al. 2008) and has been a critical plank in linking demography to Indigenous affairs and 'Closing the Gap' policies (Taylor 2009). Data issues and the changing ways Indigenous people engage with data collection tools mean we are unlikely ever to have 'definitive' population measures. But the young age profiles of Indigenous childbearing women, as well as their fertility rates, provide important insights into future population dynamics.

In Australia and elsewhere, the focus has been on statistically or administratively defined indigenous populations (as in this chapter). An emerging critical indigenous demography, however, has highlighted complex theoretical arguments about indigeneity and the rights of indigenous peoples (Kukutai 2011). Moreover, persistent differences between indigenous and non-indigenous fertility patterns point to the need for a theory of demographic change constructed by Indigenous theorists (Johnstone 2011b; Kukutai and Pool 2008; Taylor 2009). There is a common theme of young childbearing and higher fertility compared to the total population in developed countries where there are colonizing majority populations and indigenous minorities, particularly in North America and Australasia (Johnstone 2011b). In these regions, the young age profile of indigenous childbearing women persists (Martin et al. 2010; Ram 2004) even when fertility declines, indicating that explanations other than conventional transition theory are required.

Rigney (1997) has written of the need to promote indigenous methods as the first step to assisting Indigenous theorists. To this end, indigenisation of official statistics could offer a useful way forward. Key principles posited by Kukutai (2011) for Māori in New Zealand include explicit recognition of rights-bearing indigenous peoples separately from other ethnic groups; relevance—that is, data should reflect the diverse realities of indigenous peoples and be relevant to their evolving needs; inclusiveness—that is, not treating indigenous characteristics as fixed but rather as flexible; and capability—among indigenous peoples but also among users of the data, statistical agencies and policy makers.

The challenge for analysts and users of their research, who are seeking to understand the dynamics of contemporary Indigenous families, is not to 'substitute demography for anthropology' (Langton 1981: 20). To reiterate an earlier warning, our findings in relation to exogamous partnerships for Indigenous Australians

and socio-economic status should not be interpreted as a negative reflection on Indigenous families. Rather, these findings imply acute need among Indigenous families and significant barriers to accessing education, employment and income.

These findings contribute to the evidence base for policy and practice settings. The young age at childbearing and higher fertility among Indigenous women has wide-ranging policy implications. Shepherd and Zubrick (2012: 97), for example, view the 'treatment' for poor Indigenous child health outcomes as primarily demographic. That is, policy should encourage Indigenous women to delay first pregnancy and concurrently increase the proportion of Indigenous children that receive high quality educational daycare and support into primary school.

As Jackson (1998, 2008) has written regarding Australia and New Zealand, there are implications for the exacerbation of disadvantage for a young minority population characterised by young childbearing, when policy is directed at an older majority. There is a potentially disparate impact of mainstreaming Indigenous-specific policies when large cohorts are entering education and employment. Younger parents face interruptions to schooling, university or work early in their careers. The cost of private sector child care is also likely to have a greater impact on younger parents who are less likely to have capital and savings behind them, or the experience that will see them in higher paid jobs.

Despite the data issues discussed in this paper, there are clear differences in the fertility and family circumstances of Indigenous Australians compared to their non-Indigenous counterparts. Indigenous Australians partner and have children at younger ages than their non-Indigenous peers and Indigenous women have a greater number of children over their reproductive lives.

It would be misleading, however, to assume a homogeneous experience across the Indigenous population. Those who live in the south and east of the country exhibit demographic patterns that are more similar to those of the non-Indigenous population. More importantly, this chapter has demonstrated a high level of interaction with the non-Indigenous population in terms of family formation. It is true that the socioeconomic outcomes of the non-Indigenous partners of Indigenous Australians are different in key respects to the outcomes of non-Indigenous partners of non-Indigenous Australians. However, the results clearly show that the circumstances of many Indigenous adults and children are intimately tied to the circumstances of the broader Australian population, covered in the rest of this book.

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Chapter 11
Familiarly Queer? Same-Sex Relationships and Family Formation

Deborah Dempsey

11.1 Introduction

On any given weekend in the inner suburbs of Melbourne, as in most other Australian capital cities, it is commonplace to walk past a lesbian couple out and about with their baby and toddler. The phenomenon sometimes known as the 'gayby boom', whereby increasing numbers of same-sex attracted women and men become parents, is but one example of how same-sex relationships and family formation in Australia have undergone quite dramatic changes in a short space of time.[1]

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[1] Language used to describe 'non-heterosexual' families and relationships is evolving, and there is no consensus on correct terminology (see Weeks et al. 2001; Dempsey 2012a; Brown 2008; du Chesne and Bradley 2007). The term 'same-sex attracted' is used in this chapter in recognition of the fact that 'lesbian' and 'gay' are not universally used as self-descriptors by people who have same-sex relationships. The complex connection between sexual attraction, sexual behavior and a more overarching sense of sexual identity has long been noted in sexuality surveys since Alfred Kinsey's formative work in US in the 1940s, including studies conducted in Australia (Smith et al. 2003; Dempsey et al. 2001). Some Australian same-sex attracted adults (indications are, a small minority) may consider themselves 'bisexual' or 'queer' rather than 'lesbian' or 'gay' or use other identifiers (see Leonard et al. 2012; Power et al. 2010, 2012). Some of the studies of the personal lives of same-sex attracted adults discussed in this chapter also included transgender and intersex participants. 'Transgender' can refer to people who have had hormone treatment or surgery to reconstruct their bodies in order to conform to the sex and gender they identify with. It can also refer to those whose appearance, comportment and self-identification transgresses usual binary sex and gender categories in less permanent fashion (see Hines 2006; Couch et al. 2007). By contrast, "intersex" is a term used for a variety of conditions in which a person is born with ambiguous reproductive or sexual anatomy that doesn't seem to fit the typical definitions of female or male. For example, a person might appear to be male but has mostly female internal anatomy, or vice versa (see Intersex Society of North America 2013).

D. Dempsey (✉)
Faculty of Health, Arts and Design, Swinburne University, Melbourne, Australia
e-mail: ddempsey@swin.edu.au

Over the past 10 years in many Australian states and territories, same-sex couple and parenting relationships have become more visible and gained legal recognition. These developments have ensued from gay and lesbian community activism and the increasing social acceptability of same-sex couple relationships. For instance, reproductive medicine clinics have extended their donor insemination and IVF services to lesbians in Victoria, Western Australia, NSW and Tasmania, and these states have also changed their *Status of Children* legislation to enable the legal recognition of lesbian co-parenting couples, irrespective of which partner gave birth. The Federal *Family Law Amendment* (de facto Financial Matters and Other Measures) *Act 2008* now enables cohabiting same-sex couples legal protection under the Family Law Act with regard to child and property concerns (Sifris 2010). Civil union schemes exist in four Australian states and the ACT in addition to this federal recognition of same-sex cohabiting relationships (Richardson-Self 2012). In Australia, as in many other parts of the industrialized world, same-sex marriage activism has taken centre stage in the lesbian and gay rights movement.[2]

In this chapter, I situate same-sex relationships and family formation practices within debates about the distinctiveness as opposed to the 'assimilationist' tendencies of these relationships. I then discuss relational and family formation patterns within the Australian same-sex attracted communities in more depth, as documented in recent Australian surveys and qualitative studies of same-sex attracted parenting and the personal lives of same-sex attracted transgender and intersex (LGBTI) Australians. These sources confirm the popularity but by no means ubiquity of cohabiting couple and couple-based parenting relationships, and mixed feelings about the extent to which marriage rights are necessary. I argue it is important not to lose sight of the ways in which same-sex attracted Australians organize their personal lives beyond the couple and nuclear family model that marriage assumes, and to retain other legal possibilities beyond marriage for the recognition of the diverse relational forms that exist.

It is difficult to ascertain the size of the population of LGBTI Australians (see Wilson 2004; ABS 2012a). Wilson estimates, based on responses to a sexual identity question on the nationally representative Australian Survey of Social Attitudes 2003, that in the vicinity of 2 % of adult Australians identify as lesbian, gay or bisexual, with higher numbers of gay and bisexual men identified than lesbian or bisexual women (Wilson 2004). There are no official sources of information on the size of the transgender population in Australia although it is likely to be vastly smaller than the same-sex attracted population.

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[2] Familial rights yet to be extended to same-sex attracted Australians include the right to adopt children or to marry. Gay men becoming parents through overseas surrogacy also face complex legal impediments to legal recognition of their parenthood in all Australian states.

11.2 Same-Sex Attracted Adults' Family and Personal Lives

A range of preoccupations with how same-sex attracted adults' families and relationships are similar to or different from normative nuclear family relationships are evident in the international social science literature. Some argue that same-sex relationality is based on distinctive assumptions, in which monogamous couple relationships and the importance of ties to biological family or family of origin are de-centred, and friendship plays a more important part. By contrast, an increasing body of empirical work on lesbian and (to a lesser extent) gay male parenting indicates the continuing importance of family forms based on biological parenting and cohabiting couple relationships, and a number of ways in which same-sex parented families are similar to heterosexual nuclear families.

North American anthropologist Kath Weston's work popularized what has come to be known as the 'Families of Choice' thesis. In *Families We Choose* (1991), Weston emphasized the pivotal importance of friendship in lesbian and gay notions of family. Weston interviewed gay men and lesbians in the Bay Area of San Francisco, and found they tended to base their personal lives around supportive communities of friends and partners, rather than mutually interdependent ties with families of origin. Weston claimed lesbians and gay men reversed the dominant understanding that friendships do not last because they are chosen, while biological ties with family are lasting and solid. She proposed that the possibility of rejection by family of origin due to the stigma attached to homosexuality, particularly for gay men diagnosed with HIV/AIDS, led to widespread skepticism in gay and lesbian communities about the unconditional and enduring character of 'blood' or family of origin ties.

Several more recent UK-based studies of the personal lives of same-sex attracted adults lend support to the 'families of choice' thesis. In Weeks et al.'s (2001) research into 'same-sex intimacies', the authors highlighted the 'life experiments' of same-sex attracted adults or their practices of love, mutual care and maintaining households beyond the nuclear family model. Non-monogamous long-term relationships, maintaining friendships with lovers and partners once romantic relationships end, and living in shared households well into adulthood were some of the practices these authors noted as characteristic of non-heterosexual personal lives. Similarly, Roseneil and Budgeon (2004) contended that many same-sex attracted people refuse heterorelationality. In other words, they do not organize their personal lives around monogamous, cohabiting couple relationships, or serial monogamy. Roseneil and Budgeon's research participants included same-sex attracted sole parents who shared a household and supported each other financially, single same-sex attracted adults who lived with their friends well into middle-age despite having non-cohabiting romantic partners, and single gay men and lesbians who were co-parenting children together without the involvement of a sexual or romantic partner.

Somewhat at odds with this emphasis on families of choice and friendship as a means to sustaining relationships of daily care and support is the interdisciplinary body of scholarship on lesbian and gay parenting. This work tends to accentuate the

continuing and possibly increasing influence of heterorelational notions of family in the international same-sex attracted communities. For instance, much recent work on lesbian-parented families formed through donor insemination emphasizes the sharing of parenting by a cohabiting couple, in which one or both women are biologically related to the children (e.g. Reimann 1997; Dunne 2000; Sullivan 1996; Dalton and Bielby 2000; Golombok et al. 2003; Gartrell et al. 1999, 2000, 2006).

Another recent theme in the literature on same-sex parented families formed through reproductive technologies is the extent to which careful and strategic decisions about biological relatedness are key to creating and maintaining family unity and sibling relationships. This work highlights the continuing symbolic and social power of biogenetic connections in lesbian mothers' and gay sperm providers' decision-making about forming families with children (e.g. Dempsey 2005, 2010; Riggs 2008a, b; Nordqvist 2010). For instance, lesbian prospective parents may match physical characteristics of the sperm donor to the non-birth mother in an attempt to create a stronger sense of family unity through resemblances, and to make it difficult for onlookers to pick who the biological mother in the couple is (Hayden 1995; Nordqvist 2010). Gay men forming families through surrogacy may have similar preoccupations (Dempsey 2013). This indicates biological relatedness remains an important reference point in the family relationships of lesbian and gay parents, despite the same-sex relational context.

Same-sex parenting research may also challenge the notion that same-sex attracted adults turn to friends rather than families of origin for mutual support. On the contrary, the transition to parenthood is reported to bring new parents closer to their families of origin, meaning that same-sex parented children appear to have good access to grandparents and extended family of origin relationships. In the US National Longitudinal Lesbian Families Study, which has been running for nearly 20 years now, many of the lesbian couples taking part reported strong social support from their parents. Most grandparents were very happy about having grandchildren, and grandparents' openness about their daughters' lesbian-parented families increased over time (Gartrell et al. 1999, 2000, 2006). Having children strengthened the relationships between lesbian mothers and their own parents. Goldberg (2010) also found that both partners in lesbian couples received increased support from their own parents in the transition to parenthood. It is also apparent that having children brings gay men closer to their own parents and other members of their families of origin (Tuazon-McCheyne 2010; Bergman et al. 2010; Power et al. 2012).

The assumption that same-sex couples are at the core or heart of family relationships is also apparent in the focus of gay and lesbian community activism, and of law reform in Australia. Obtaining legal recognition for same-sex cohabiting relationships, on a par with the considerable legal recognition now extended to heterosexual de facto relationships, was the priority for gay and lesbian rights lobbies throughout the 1990s and early 2000s (see GLAD 1994; VGLRL 1999), resulting in amendments to various state and federal acts. Lesbian parenting rights activism in the early to mid 2000s succeeded in changing the state laws in favour

of 'presumptive parenthood' (see Dempsey 2008; VLRC 2007, Millbank various). This means that state legislation governing the registration of children's births and status of children's parentage is applicable to lesbian as well as heterosexual couples that have children by donor insemination. Lesbian couples in Western Australia, NSW, Victoria, ACT and Tasmania now have legal parenting rights from the time of a child's birth as long as the lesbian co-parent consented to the birth mother's donor insemination pregnancy (see Sifris 2010; Surtees 2011). Changes to the Status of Children Act in New Zealand in 2005 similarly gave parental rights to the same-sex partner of a woman who gives birth, and extinguished any legal claim to parenthood by the sperm donor (Surtees 2011).

As Hopkins et al. (2013) have recently noted in the US, increasing legal recognition for same-sex couples, including parents, and demands that this should be extended to marriage rights generate a strong critique from some scholars and activists. A counter claim from those influenced by queer theory and gay liberation sensibilities is that legal reform emphasizing cohabiting couple relationships, with marriage at the pinnacle of these, is in danger of erasing the distinctiveness of LGBT personal lives. For instance, queer theorists such as Lisa Duggan (2002) and Michael Warner (1999) raise concerns that gay marriage is 'assimilationist' and will marginalize those members of the LGBT communities who cannot or choose not to privilege monogamous, cohabiting relationships. They fear the fight for marriage rights will confer normalcy to 'good, married, monogamous' gay men and lesbians at the expense of their 'bad, queer, promiscuous' counterparts, and further marginalize the relationships of care and mutual support that are predicated on friendships rather than couple relationships.

Having sketched out the parameters of this debate about distinctiveness, diversity and assimilationist tendencies in same-sex relationships, I turn now to look in more depth at recent family, household and relationship patterns in the Australian same-sex attracted communities. Data in this section of the chapter come from the Australian Census and three recent non-representative national surveys of the relational lives of same-sex attracted and gender diverse Australians. These surveys are: Private Lives 2 (PL2) (Leonard et al. 2012), a Victoria-based national survey of 3,853 Australians; Not so Private Lives (NPL) (Dane et al. 2010), a Queensland-based national survey of the relationship patterns and forms of relationship recognition desired by 2032 Australian same-sex attracted adults[3]; and Work, Love, Play (Power et al. 2010), a survey of family formation practices among 445 Australian same-sex attracted, transgender and intersex parents. I also draw on my qualitative research into family formation practices in the Australian same-sex attracted communities.

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[3] The Not So Private Lives online survey was conducted by researchers in the School of Psychology at The University of Queensland, Australia. It aimed to add to knowledge of the personal lives of sexual minorities in Australia. Themes covered by survey questions included: the timing of disclosure of same-sex attractions; preferred relationship recognition; same-sex attracted individuals' perceptions of how others value their relationships relative to different-sex relationships and the role of mainstream acceptance in relation to psychological well-being.

11.3 Relationships, Family and Household Circumstances

Since 1996, the Australian Census of Population and Housing (hereafter 'the census') has provided information on numbers of same-sex cohabiting couples in Australia (Fig. 11.1). Same-sex couples have increased in number in every census since 1996. More than triple the number of couples counted in 1996 was counted in the most recent 2011 census (ABS 2013). This could indicate increasing willingness to disclose relationship status due to perceptions of the greater social acceptability of homosexuality or same-sex relationships, rather than a rise in the numbers of couples per se. In each census since 1996, male same-sex couples have outnumbered female same-sex couples (Fig. 11.1).

In the 2011 census data, there is more detail available than in previous census collections about how same sex couples described their relationships. The majority (96 %) of individuals in the 33,714 same-sex couples counted described themselves as de facto partners. A relatively small minority of individuals living in same-sex couple households (about 4 %) referred to themselves as 'husband' or 'wife'. Given gay marriage is not permitted in Australia, those who referred to their partner as a spouse may have done so because this was their subjective view of the status of their partnership, or due to the fact that they had married overseas in a jurisdiction where gay marriage is legal (ABS 2012a).

Census data collected in 2011 indicated there are far fewer same-sex couples with resident children than heterosexual couples with children. Same-sex couples with resident children were also greatly outnumbered by same-sex couples without resident children. It was much more common for female than male same-sex couples to have children living with them in the household (22 % of female couples compared with 3 % of male couples) (Fig. 11.2). In 2011, 12 % of same-sex
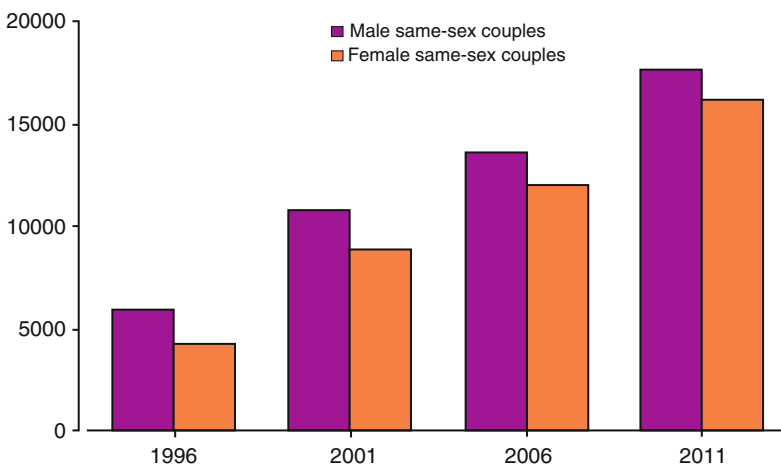
Fig. 11.1 Same-sex couples, Australia, 1996–2011 (ABS 2013)
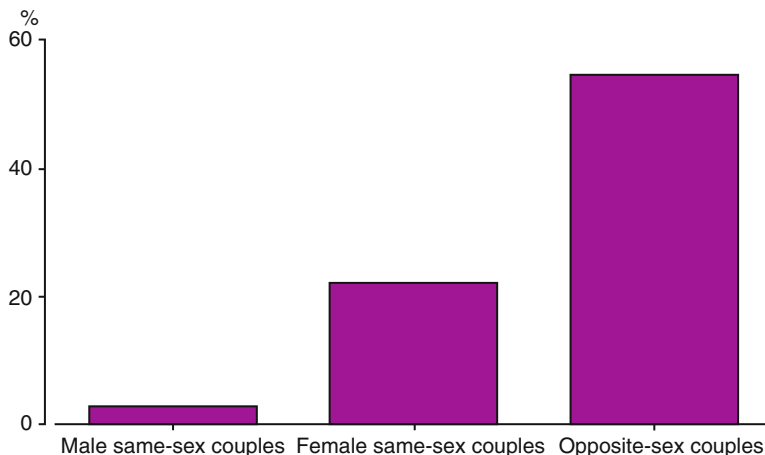
Fig. 11.2 Couples with resident children (includes all dependent and non-dependent children in the family), Australia, 2011 (ABS 2013)

cohabiting couples counted in the census had dependent or adult children living with them, which is an increase of 1 % on the figure obtained from the 2001 census (ABS 2002).

Surveys conducted in the Australian same-sex attracted communities can provide more detail about relationship and household circumstances than census data, which only documents cohabiting couple relationships. PL2 was conducted by Gay and Lesbian Health Victoria and The Australian Research Centre in Sex, Health and Society, La Trobe University in 2011.[4] Although the focus of PL2 is the health and well-being of same-sex attracted and transgender Australians, the survey asked participants a number of descriptive questions about their relationship, family and household circumstances. Answers to these questions indicate that although cohabiting couple relationships were popular, many respondents were not in couple relationships or couple-based households. Nearly 40 % of respondents currently lived with their partner only, 7 % with their partner and one or more children, and 23 % lived alone. Almost a quarter or 22 % lived with a housemate or friends. About 4 % of respondents reported living as a single parent with one or more children, while almost 17 % lived with one or more parents and/or relatives.

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[4] PL2 participants were aged between 16 and 89 years (mean age of 38), with 48 % identifying as female, 44 % as male, 4 % as transgender and over 3 % preferring another term to describe their sex/gender. Just over 42 % identified as "gay", 30 % identified as "lesbian" and 12 % as "bisexual". Participants came from all Australian states and territories in numbers roughly proportionate to the population. They were well educated compared to the Australian population and also more likely to be employed.

Table 11.1 Living arrangements of PL2 respondents compared to living arrangements of census respondents, 2011 (PL2; ABS 2012b)

	PL2 2011 (16–89 years)	Census 2011 (15+ years)[a]
	%	%
Living with partner (with or without children)	47	59
Living alone	23	12
Housemate/group household member	22	5
Lone parent	4	6
Living with parents or relatives	17	17
Unrelated individual living in family household	2	1
Total	115[b]	100

[a]Persons in occupied private dwellings, excluding those who were not at home on census night
[b]Percentages do not add to 100 because the PL2 survey allowed for multiple responses

Table 11.1 presents these proportions alongside proportions in the same living arrangements amongst the general population aged 15 years or more, the latter derived from the 'relationship in household' variable in the 2011 census. The two data sources are not strictly comparable because the PL2 survey allowed for multiple responses, whereas the census data categories are mutually exclusive. Nevertheless, the figures suggest that same sex attracted Australians are more likely than others to live alone or in group households, while being less likely to live with a partner.

Although many respondents to PL2 were in monogamous couple relationships, it was also apparent that alternatives to monogamous cohabitation were popular. Of the 55 % of PL2 respondents who were currently in a relationship, 94 % were in a relationship with one other person, while the remaining 6 % were in a relationship with more than one person. About 62 % of the group reported that they were in a monogamous relationship, while a substantial minority (27 %) indicated they "have a clear and spoken agreement with their regular partner about casual sex with other sexual partners" (Leonard et al. 2012, p. 22). Furthermore, it was quite common for partners not to cohabit. Over a quarter or 28 % of the people in a relationship did not live with their partner.

There was also evidence that considerable numbers of respondents would turn to their friends for emotional support or care in the event of illness, although most made qualitative distinctions between the kinds of support provided by friends as opposed to partners and family of origin. In answer to a multiple response question, 73 % said they would turn to LGBT friends for emotional support, 67 % to straight friends, 56 % to a current partner, and 53 % to their family of origin. Indications were that family of origin was relied on by most in the event of illness (61 %), followed by a current partner (53 %). However, just over a third of the group indicated they would turn to their friends for care in the event of illness. These results suggest that same-sex attracted and transgender people associate dependent care more with ties of blood and intimate relationships; however, a sizeable minority relied on friends for this kind of support.

11.4 Parenting in the Australian Same-Sex Attracted Communities

Available data sources indicate relatively small numbers of children parented by same sex couples, with lesbian parents of resident children outnumbering gay male parents. The 2011 Census counted 6,120 children and young adults under 25 years living in mostly female same-sex couple families. Of these children, 78 % were under 15 years of age, 14 % were dependent students, and 8 % were non-dependent children aged 15–24 years (ABS 2012a). The Census cannot give an accurate picture of how many lesbians and gay men have children because it only counts resident children and does not collect information on people's individual sexual identity. Lesbians or gay men who live in sole parent households are not identified although they would be included in the total number of sole parents (ABS 2012a). Of almost a quarter or 22 % of PL2 respondents with children, about 11 % of gay male participants indicated that they were parents or step-parents, or had some other kind of parent-like relationship with children, as opposed to 33 % of lesbian participants.

Planned same-sex parented families may be beginning to outnumber same-sex families in which the children were born in the context of a previous heterosexual relationship. Power et al. (2010) found more participants had children in the context of same-sex relationships, including a number of gay male couples who had children through surrogacy arrangements overseas. Planned same-sex parented families also include those created through foster care and permanent care arrangements (Riggs 2007, 2011). The reverse was true of an earlier Australian survey conducted by McNair and colleagues (2002) in which the majority of (mostly lesbian) participants had children from prior heterosexual relationships. These data in themselves are insufficient to determine that planned same-sex families in Australia outnumber families in which the children were conceived in previous heterosexual relationships, given sampling and recruitment methods could explain this difference. However, reproductive technologies did become more accessible to lesbians and single Australian women and gay men in the intervening period between the surveys. Law reform in a number of Australian states may also have led to more lesbian couples feeling secure in their decision to become parents.

The Work, Love and Play survey found there were six major family forms in the Australian and New Zealander same-sex parenting communities. These include: a two-parent same-sex couple based family; families in which a lesbian couple were the primary parents but a known sperm donor lived separately and had involvement in the children's lives; families in which a lesbian or gay man was still co-parenting with an ex-heterosexual partner; separated same-sex families where women or men were co-parenting with their ex-same-sex partner; sole parent families and finally, multi-parent families, usually a gay male couple and a lesbian couple raising children from birth across two households (Power et al. 2010).

Dempsey (2010, 2012a, b) notes there are a range of possibilities for the relationship between known sperm donors, children and lesbian parents, which may give rise to two, three or four parent families. At one end of the spectrum, the sperm donor may

be anonymous or have very little or no involvement with the children. Conversely, and less frequently, sperm donors may be acknowledged as known fathers or full co-parents with substantial care-giving responsibilities and entitlements. In addition to the two parent lesbian couple family, some of the participants in Dempsey's research included single gay men and their single lesbian friends who lived near each other and were raising children together, lesbian couples co-parenting their children with gay male couples who lived nearby or interstate, and lesbian couples who co-parented children with regular non-resident parental support from the 'donor dad'. Although it appeared rare for multi-parent families to cohabit or for the men to have equal responsibilities to the women when it came to children's primary care, some assumed parental responsibilities, particularly as children grew beyond infanthood. These included decision-making about schooling and healthcare, over-night stays for some weeknights, weekends and school holidays and/or provision of financial support for children's education.

11.5   Desired Forms of Relationship Recognition

PL2 and NPL asked about desired forms of relationship recognition in the same-sex attracted communities, albeit in different ways. PL2 asked people in relationships whether or not they planned to formalize their relationship and how. By contrast, NPL asked all respondents, those currently in relationships and those not in relationships, a more comprehensive array of questions about the kinds of formal legal recognition for relationships they were interested in.

In PL2, 55 % of respondents were in a relationship. Nearly 18 % of this group reported that they had formalized their commitment (through marriage overseas or some other ceremony), and about a third or 34 % said that they had yet to formalise their relationship but either planned to or would like to. This indicates that nearly one half of the PL2 group who were in a relationship were not unduly concerned by relationship recognition issues.

All NPL respondents were asked 'If you are or were to become involved in a long-term committed same-sex relationship, in what way would you prefer Australian law to recognize your relationship?' Findings revealed respondents' preferences for a range of options for having their own relationships formally acknowledged. Marriage was the preferred choice for recognition, with 55 % of respondents stating they preferred or would prefer the option of marriage. The next largest group preferred having their relationship recognized and documented at a Federal registry other than marriage (28 %) and 15 % wanted de facto status rather than marriage or formal registration. Only 3 % of respondents said they would prefer to have no legal recognition at all of their own relationship.

NPL findings also showed that numbers of those who selected marriage as their personal choice were higher among younger respondents (see Fig. 11.3). Two-thirds of participants aged 18–19 selected marriage as their personal preference compared with one third of those 60 years of age or older. Similarly, proportions of respondents
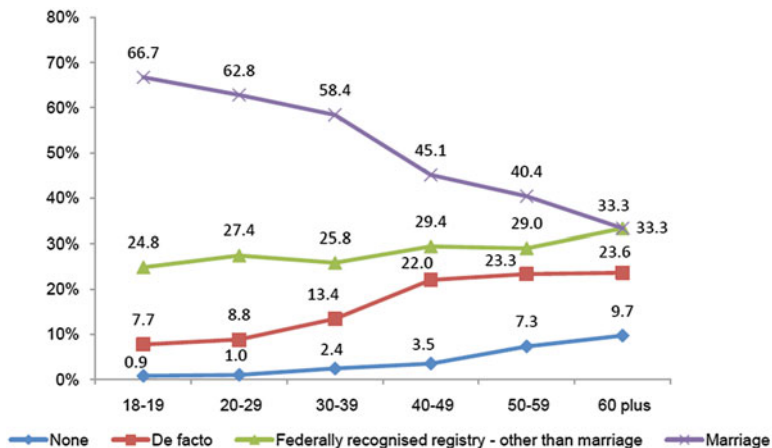
Fig. 11.3 Personal preference for relationship recognition by age (n = 1,877), NPL survey (Dane et al. 2010: 44)
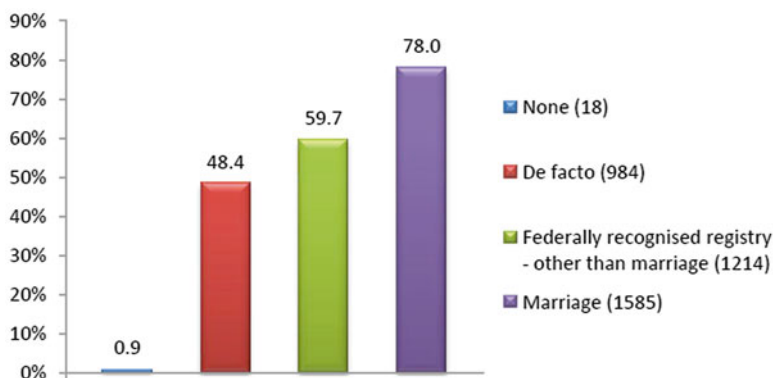
Fig. 11.4 Legal options respondents believed should be available to Australian same-sex couples (n = 2,032), NPL survey (Dane et al. 2010: 49)

supporting de facto or no legal recognition were higher among the older cohort. Preferences for a federally recognised registry (other than marriage) varied only slightly between age groups, relative to other options. The majority of both male and female participants in the three younger age groups (i.e., 18–19, 20–29, and 30–39) selected marriage as their personal choice. Although marriage was the most frequent response for both male and female participants in the older age groups (except the 60+ group), the proportions nominating this answer were less than 50 %.

Finally, respondents to NPL were asked about which forms of legal relationship recognition they would like to see remain in general and/or become available in this country for same-sex couples (see Fig. 11.4). Responses to this question (which allowed for multiple responses) followed a similar pattern to the personal

preference for own relationship recognition question in that marriage was the most popular form of recognition and no recognition was the least popular. In general, 78 % of respondents, regardless of their current relationship status, would like to see marriage become available, 60 % would like to see a federally recognised relationship other than marriage to be made available and 48 % would like to see de facto recognition remain. Many participants selected multiple options, indicating strong beliefs that there should be a choice and a range of options for relationship recognition.

11.6   Gay Marriage and Beyond

To summarise what these data can tell us about the relationship and family circumstances of same-sex attracted Australians, there is evidence for the popularity of cohabiting couple relationships and of dependency on intimate partners as well as family of origin members in circumstances where care is needed in the event of illness. However, large numbers of same-sex attracted Australians, in keeping with the 'families of choice' thesis discussed earlier, do not have cohabiting or monogamous partners, do not have or live with children, live alone or in shared household arrangements, and would turn to friends rather than a partner or family member in the event of illness.

The family lives of Australian same-sex attracted parents reveal overlap and divergence from heterorelational assumptions about family. Some children raised by lesbians and gay men will have been born into a heterosexual parented family in which parents later divorced and subsequently live in a same-sex parented step or blended family. Although many children raised from birth by lesbian or gay parents live in same-sex versions of a nuclear family, in which a cohabiting couple share parental responsibilities, there is a sizeable minority of lesbian-parented families in which children will also have contact with their known sperm donor and possibly his partner who may also have non-resident parental involvement.

Participants in PL2 and NPL varied with regard to the degree to which they believed relationship recognition important, and also indicated they valued diverse forms of relationship recognition beyond marriage rights. This is not surprising given the degree of relationship and family diversity already documented above. Single people stand to gain very little from recognition of couple relationships or gay marriage. Similarly, while marriage may be of great benefit to same-sex attracted parents in two parent families, other legal arrangements will continue to be needed to protect the rights of known sperm donors and/or their partners in families where the intention is that the men as well as the women have parenting rights in law (see Surtees 2011 for elaboration of this point in relation to New Zealander same-sex parents).

Living personal lives beyond heterosexuality may generate a range of assumptions about the meaning and conduct of family and intimate relationships, some of which closely resemble heterorelational family forms and some of which do not. At the same time, it appears that some of the 'life experiments' (Weeks et al. 2001) such as non-monogamy and rejection of institutionalized couple relationships, that were at

the forefront of Gay and Women's Liberation era critiques of the heterosexual nuclear family, have receded in the public discourse on same-sex relationships in Australia at this historical moment. Duggan (2002) coined the term 'homonormativity' to convey the assimilationist impulse she sees at work in the fight for marriage rights in the US, potentially at the expense of a distinctively 'queer' LGBT culture that embraces other kinds of relational values and arrangements. In this view, law reforms based on rights for married couples that privilege romantic love, monogamy and reproductive sexuality potentially threaten other kinds of relationships and relationship recognition. These include the mutual care and support for friends highlighted earlier through the literature on families of choice (Weston 1991; Weeks et al. 2001; Roseneil and Budgeon 2004), and arguably more relevant to the large numbers of people in Australia living beyond cohabiting coupledom.

In Australia, the campaign for gay marriage rights utilises the slogan 'Make Love Equal'. For many gay activists and members of the Australian same-sex attracted communities, only the right to marry on an equal footing with heterosexual couples will represent full equality for gay and lesbian family relationships. Although gay marriage would bring a number of legal and social benefits to same-sex attracted Australians, and the data discussed in this chapter suggest that many lesbian and gay couples would marry were this option open to them, this is clearly not the only form of relationship recognition that is relevant and appealing to Australian same-sex attracted adults. Notably, there are generational differences evident in support for marriage rights in that younger same-sex attracted adults appear more enthusiastic than their older counterparts about this form of relationship recognition. Ambivalence or outright distaste for marriage among older participants has also been noted in Australian qualitative research conducted with gay men aged between 19 and 87 (see Robinson 2012). These generational differences in sensibilities about relationship recognition warrant further exploration.

Richardson-Self (2012) has recently argued for a pluralisation strategy in Australia that would seek legal recognition for gay marriage but not at the expense of the other forms of relationship recognition that currently exist. Of note here is that some of the civil union schemes in existence in Australia do have the capacity for recognition of other kinds of relationships apart from cohabiting couple relationships in cases where those relationships are providing the kind of domestic support and care often associated with cohabiting relationships based on sexual intimacy and/or romantic love. For instance, The Relationships Act 2003 (Tas) has the capacity to recognize 'significant relationships' and 'caring relationships' whether or not these are relationships between friends, intimate partners or biologically related family members. As Richardson-Self points out, a pluralisation strategy cannot work without encouraging other familial and relational forms beyond marriage and cohabiting coupledom.

From the data available on how same-sex attracted and gender diverse Australians live their personal lives, it is difficult to know the degree to which those living beyond cohabiting coupledom actively choose to do so in defiance of heterorelationality. It is conceivable that many single adults would prefer to be in relationships, or that many child-free adults would have had or adopted children had their life circumstances

and opportunities been different. Nonetheless, it is clearly important to the lives of many same-sex attracted and gender diverse adults to maintain an Australian legal and policy context that recognises diverse family structures and practices beyond cohabiting couple and same-sex nuclear family relationships, and does not unduly privilege marriage as at the pinnacle of relationship recognition.

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Technical Appendix

The Household, Income and Labour Dynamics in Australia (HILDA) Survey

The analysis in this book makes heavy use of data from the Household, Income and Labour Dynamics in Australia (HILDA) survey (see Chaps. 2, 3, 5, 6, 7 and 8).

The HILDA project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this book, however, are those of the authors and should not be attributed to either DSS or the Melbourne Institute.

The HILDA survey is a household-based panel study designed to collect information about economic and subjective wellbeing, labour market dynamics and family dynamics (Melbourne Institute 2005). HILDA provides excellent data for the purposes of the analyses in this book, comprising a large sample, repeated annual waves of data collection, and instruments collecting a range of economic, demographic and attitudinal characteristics of individuals, as well as marital and relationship histories and household level characteristics (Watson and Wooden 2012). In some years it includes special modules, such as the Generations and Gender Programme module analysed in Chap. 7 (see Sect. 7.2.1). The chapters in this book draw on Waves 1 to 10 of the HILDA survey, collected from 2001 to 2010.

HILDA is a nationally representative sample of Australian households, with all household members aged 15 and over eligible for inclusion. The data generated relate to both individuals and households. Wave 1 comprised 7,682 households and 13,969 individuals. Households were selected using a multi-stage sampling approach, and a 66 % response rate was achieved (Watson and Wooden 2002). Within households, data were collected from each person aged over 15 years using face-to-face interviews and self-completed questionnaires, achieving a 92 % response rate from household members (Watson and Wooden 2002). Subsequent waves retained between 87 and 95 % of previous wave participants (Watson and Wooden 2012).

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